JVC®

DOME TYPE NETWORK CAMERA

VN-C655

INSTRUCTIONS
(B)

JVC

V.NETWORKS

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LW40710-001B

Safety Precautions

FOR USA AND CANADA

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE.REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash wish arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Information for USA

This device complies with part 15 of the FCC Rules. Changes or modifications not approved by JVC could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Due to design modifications, data given in this instruction book are subject to possible change without prior notice.

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

AVERTISSEMENT:
POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTRO-CUTION, NE PAS EXPOSER L'APPAREIL A L'HUMIDITE OU A LA PLUIE.

INFORMATION (FOR CANADA)
RENSEIGNEMENT (POUR CANADA)

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la Class A est conforme á la norme NMB-003 du Canada.

WARNING (FOR EUROPE):
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

■ This installation should be made by a qualified service person and should conform to all local codes.

■ This installation shall be in accordance with the National Electrical Code, ANSI/NFPA 70.

■ This product shall be powered by a Listed Class 2 power supply only.

■ Any Mention in this manual of Alarm inputs/outputs have not been evaluated by UL to be used for Burglar Alarm Functionality.

These are general IMPORTANT SAFEGUARDS and certain items may not apply to all appliances.

IMPORTANT SAFEGUARDS

1. Read all of these instructions.
2. Save these instructions for later use.
3. All warnings on the product and in the operating instructions should be adhered to.
4. Unplug this appliance system from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
5. Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.
6. Do not use this appliance near water - for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
7. Do not place this appliance on an unstable cart, stand, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart or stand recommended by the manufacturer, or sold with the appliance. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer. An appliance and cart combination should be moved with care.
   Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

   PORTABLE CART WARNING
   (symbol provided by RETAC)

   S3125A

8. Slots and openings in the cabinet and the back or bottom are pro-vided for ventilation, and to insure reliable operation of the appliance and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the appliance on a bed, sofa, rug, or other similar surface. This appliance should never be placed near or over a radiator or heat register. This appliance should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
9. This appliance should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company. For appliance designed to operate from battery power, refer to the operating instructions.
10. This appliance system is equipped with a 3-wire grounding type plug (a plug having a third (grounding) pin). This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding plug.
11. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it form the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
12. Do not allow anything to rest on the power cord. Do not locate this appliance where the cord will be abused by persons walking on it.
13. Follow all warnings and instructions marked on the appliance.
14. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
15. Never push objects of any kind into this appliance through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the appliance.
16. Do not attempt to service this appliance yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
17. Unplug this appliance from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    a. When the power cord or plug is damaged or frayed.
    b. If liquid has been spilled into the appliance.
    c. If the appliance has been exposed to rain or water.
    d. If the appliance does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to normal operation.
    e. If the appliance has been dropped or the cabinet has been damaged.
    f. When the appliance exhibits a distinct change in performance - this indicates a need for service.
18. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
19. Upon completion of any service or repairs to this appliance, ask the service technician to perform routine safety checks to determine that the appliance is in safe operating condition.

Introduction

Thank you for purchasing this product.
(These instructions are for VN-C655U.)
Before beginning to operate this unit, please read the instruction manual carefully in order to make sure that the best possible performance is obtained.

Contents

Characteristics

■ **High-speed Rotating Table**
High-speed rotating table with a horizontal panning speed of 300˚/sec and vertical tilting speed of 180˚/sec makes it possible to recall a preset position quickly.

■ **Optical + Electronic zooming**
The 25X optical zoom lens and 10X electronic zoom circuitry allows the camera to be used even in surveillance situations in which the object is very small.

■ **Day/Night Surveillance**
When the light is low, the camera is able to switch automatically to the high-sensitive (Black & White) mode by turning ON/OFF the IR filter.
It also supports infrared illuminators (wavelength of 850 nm to 880 nm).

■ **Employment of a highly-sensitive CCD and bright zoom lens**
Employment of a highly-sensitive CCD and bright zoom lens with a maximum aperture ratio of F1.6 (at the Wide end) produces a highly sensitive color mode of 2.0 lx (AGC: 20 dB, 50%).

■ **Frame Rate**
Supports a maximum frame rate of 30 fps when resolution is 640 x 480 in the JPEG compression format.

■ **Supports Multicast**
Support for multicast enables sending of an image data to multiple PCs on the network at one time without lowering the frame rate.

■ **DSP with a wide dynamic range**
Even objects that have a large difference in brightness can be monitored clearly.

■ **Private Mask Feature**
This feature enables setting to mask a certain portion of the shooting area if it is to be hidden.

■ **Motion Detection Feature**
Enables output of alarm upon detecting motion of images within a specified area.

■ **Built-in Web Server**
Enables browsing using the Internet Explorer.

Operating Precautions

■ To save energy, turn off the power supply of the system when not in use.
■ This camera is intended for indoor use. It cannot be used outdoors.
■ This camera has been designed for suspension from ceilings. Fixing it to the ground surface or at an angle may cause malfunction or shorten the product's service life.
■ Do not install or use the camera in the following locations.
  • Places exposed to rain or water
  • Places containing vapor or oil soot, such as kitchens
  • Places exceeding the operating ambient temperature range (0˚ to 40˚)
  • Places where corrosive gases are generated
  • Places nearby radiation or X-rays as well as sources of strong radio waves or magnetism
  • Places subject to vibration
  • Places with excessive dust
■ Insufficient ventilation may cause the camera to malfunction. Be careful not to block ventilation around the camera.
This camera radiates heat from its surfaces

(top panel facing ceiling and side panel). Do not install at a location that may trap heat, such as near the walls.
■ Do not install at a location that may expose the camera directly to cool air, such as nearby the air outlet of air conditioners. This may cause moisture to condense within the dome cover.
■ Dew condensation may occur when there is a drastic change in the ambient temperature of the camera, hence causing a malfunction. When the camera is installed at such locations, turn on the power after allowing it to dry for a few hours.
■ Do not point the camera lens at a strong light source such as the sun. Doing so may cause the camera to malfunction.
■ This camera contains a built-in AGC circuit. As a result, gain increases at dark places and screen may appear grainy. This is not a malfunction.
■ When an equipment that generates a strong magnetic field, such as transceivers, is used near this camera with the AGC turned on, beat noises may appear in the image. When using a transceiver, therefore, place it at least 3 m away from this camera.

■ If this camera or cable connected this unit is used near a location where strong electrical or magnetic waves are generated (eg. radios, TVs, transformers, monitors, etc.), noise interference may occur in the image or its color may be affected.

■ When the AGC circuit is on, brightness of the screen may not change upon switching the Auto Iris mode (Normal, + or -) using the V.Networks Controller. This is due to the automatic gain boost feature that is activated. In this case, set AGC to OFF or use the manual iris mode.

■ Under certain brightness conditions, switching the Auto Iris mode (Normal, + or -) using the V.Networks Controller may not bring about any change in brightness. In this case, set the iris to the manual mode.

■ When this camera is used in the White Balance (ATW) mode, the colors captured may differ slightly from the actual colors due to the operational principles of the auto-tracking white balance circuit. This is not a malfunction.

■ When shooting a bright object (eg. lamps, etc.), white vertical streaks may appear on the object on the screen. This is a phenomenon (smear phenomenon) normal to CCDs (solid-state image pickup devices) and is not a malfunction.

■ When the camera is used to monitor the same position over prolonged hours (such as 24 hours of continuous monitoring), contact resistance of the panning mechanism may increase. This may cause noise interference in the image or unstable operation of the V.Networks Controller. To prevent this from occurring, turn the power of the system off and on again (to initialize camera) once a week and clean the contacts.

■ The dome cover is hemispherical in shape, and therefore images tend to be distorted at the edges of the hemisphere. The edges of the hemisphere is masked for this camera. When the camera is tilted and pointed in the horizontal direction, therefore, edges of the hemisphere may enter the angle of view, hence causing the upper end of the screen to appear dark and the image to go out of focus.

■ When shooting an object that is near a light source (eg. lightings) or with a large difference in brightness, ghosting may occur on the screen. This phenomenon is due to the characteristics of the dome cover and built-in lens and is not a malfunction.

■ Ensure to use the Converter Unit that has been supplied.

■ When playing back images by connecting a coaxial cable to the VIDEO OUT terminal, the image on the screen may appear shaky (rotational motions are not smooth) when using the Manual or Auto Pan operation particularly near the Tele end. This phenomenon is due to the characteristics of the motor and is not a malfunction.

■ Certain hubs/switches that are equipped with the SNMP feature may come with a broadcast or multicast control function. Proper viewing of multicast images created by this camera may not be possible if this function is enabled.

■ Do not touch the dome cover with your hand. This may dirty the cover and cause the image quality to deteriorate.

■ To clean the camera.
  • Do so upon turning off the power.
  • Use a lens cloth (or paper) to remove dirt from the dome cover. The camera may acquire dirt over a short period of time, depending on the environment of use.
    When there is excessive dirt, wipe using a lens cloth (or paper) upon wetting it in a neutral detergent diluted with water.

■ Do not connect cameras other than VN-C655 to the ceiling mount. Doing so may cause the camera to malfunction.

■ **Consumable Parts**

The following parts are consumable. Please replace them accordingly after a certain number of hours or count of operations. The service lives given below are only reference values and may vary according to the operating environment and conditions. Note that replacement of consumable parts is chargeable even within the warranty period.

• Zoom lens assembly
  Zooming operation   : 2 million times
  Focusing operation : 4 million times
• Slip rings   : Approx. 5 million operations
• Cooling fan   : Approx. 30,000 hours

■ **Zooming operation**

Focus may deviate slightly upon stopping of a zoom operation near the Tele end manually or using a preset selection.

In addition, the manual zooming operation may not always be smooth.

These phenomena are due to the characteristics of the built-in lens and are not malfunctions.

Operating Precautions (continued)

■ Auto Focus

Although this camera comes with the one-push auto focus and EASY AF auto focus features, auto focusing may sometimes be impossible depending on the object and camera settings. When this occurs, adjust the focus manually.

Objects for which auto focusing is difficult

- When brightness of the screen is extremely high (bright)
- When brightness of the screen is extremely low (dark)
- When brightness of the screen varies continuously (eg. flashing lights, etc.)
- When there is poor contrast
- When vertical stripe patterns recur on the screen

Camera settings for which auto focusing is difficult

- When the AGC gain level increases and the screen becomes grainy
- When SENSE UP is activated and the image contains only little motion.

■ Read Me

Please read through the "Read Me" file in the CD-ROM together with this instruction manual.

■ Preset Positions

- The is a total of 100 preset positions that can be set, including the home position.
- The TILT position can be set and operated only between 0° to 90° even when the item "FLIP" is set to ON.

■ Image sending may be affected when this is done on a network where multicast transmission devices are connected, or on networks for which there is transmission of voluminous broadcast data. When this occurs, ensure to employ a system design that separates the camera from other multicast or broadcast devices by making use of a switching valve or VLAN with a multicast control function.

⚠ Warning

Install at places that are strong enough to support the camera weight.

Install this camera at places that are strong enough to support its weight upon taking into consideration the vibration force during high-speed rotation as well as its mass (approx. 2.2 kg). For ceiling materials that are weak, such as overlay plywood and plaster boards, reinforce by applying reinforcements (veneer plywood). If reinforcement is inadequate, image on the monitor screen may be blurred due to vibrations. In the worst scenario, it may even fall and cause serious injuries if there is someone underneath.

How to Use This Manual

Characters and symbols used in this manual

**Caution**   Points to pay attention to during operation.

Note   Details for reference, such as functions or constraints during use.

☞   Pages or items to refer to.

* JVC shall not be held liable for any loss or damage to the customer or any claim from a third party arising from the use of this software.

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Items Included
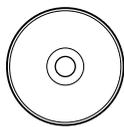
CD-ROM (instruction manual inside)

Ceiling Mount

Read Me First
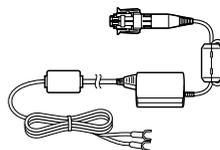
Warranty Card

JVC Service Information Card

Safety Precautions

Screw (M3x12 mm)

Cable Plate

Converter Unit

Operating Environment

PC Specifications

OS	: Windows 2000 Professional (SP1 or later)
	Windows 2000 Server
	Windows XP Home Edition
	Windows XP Professional
CPU	: Equivalent to or higher than Pentium 3, 500 MHz (Pentium4, 3.2 GHz recommended)
Memory	: 128 MB and above (1 GB recommended)
Hard Disk Space	: 20 MB and above
Display and Video Card	: 1024 x 768 pixels or higher, true color (24 bit or 32 bit)
	*VRAM 8MB and above (256 MB and above recommended)

LAN Environment
• 10BASE-T/100BASE-TX networks mutually connected by IEEE802.3-compliant hubs

Note

- General users of Windows XP or restricted users of Windows 2000 are not allowed to add/ delete V.Networks or change snapshot and recording settings.
- The PC specifications above are only reference values for smooth operation of this application, and are not meant to guarantee operation of this application. Even if the PC satisfies the technical requirements, problems may occur depending on its usage.

Caution

If the OS specifications of the PC to be used are higher, they precede those described above.
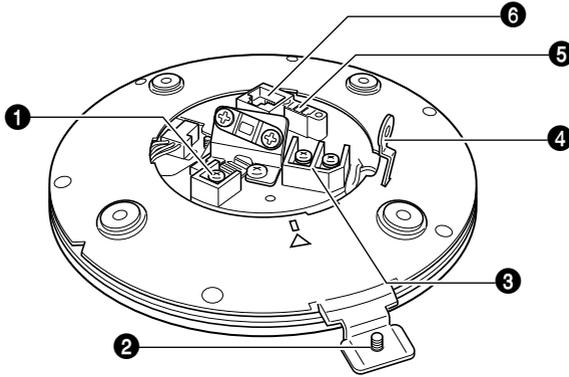
Latest Updates

To upgrade the software version or obtain any other latest information, please visit the following website:
http://www.jvc-victor.co.jp/english/pro/vnetworks/index-e.html

Name and Function of Parts

■**Ceiling Mount**

❶ **[MONITOR OUT] Coaxial Cable Terminal**
Output Terminal of a composite video signal (1 Vp-p) with an output impedance of 75 Ω, to be connected to video monitor, etc.
(☞Page 17)

❷ **Locking Screw**
Tighten this screw to fasten the camera clamping bracket.

❸ **[POWER INPUT DC18V] Terminal**
Connect to a supplied Converter Unit.
(☞Page 18)

❹ **Safety Wire Hole**
To prevent the possibility of the entire camera falling down, attach the safety wire between this hole and a secure attaching position in the ceiling.
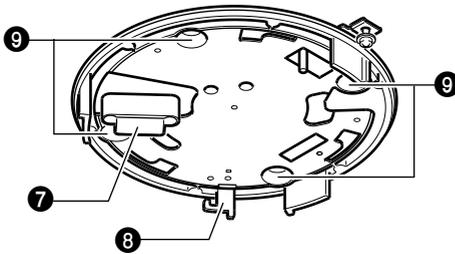
❺ **[ALARM I/O]Alarm Input/Output Terminals**
Terminals for Alarm input and Alarm output.
(☞ Page 15)

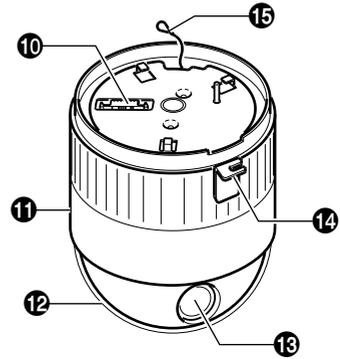| Pin No.	Signal Name	
1	ALARM OUT	ALM OUT 1
2		ALM OUT 2
3	ALARM IN	ALM IN 1
4		ALM IN 2
5	GND	

❻ **[10BASE-T/100BASE-TX] Connector**
For network connection with a LAN cable.
(☞ Page 16)

■**Ceiling Mount**   ■**Camera**

(Camera Connector side)

❼ Camera Terminal (Female)
Connect to ❿, the Male Terminal on the camera.

❽ Drop Prevention Hook
Attach the Drop Prevention Wire & to this hook to prevent the camera from falling.

❾ Clamping Holes (x 4)
Attach the camera to a ceiling using these holes.

❿ Camera Terminal (Male)
Connect to ❼, the Female Camera Terminal on the Ceiling Mount.

⓫ Camera Body Cover
Do not remove the camera body cover while the camera is installed on a ceiling. Doing so will cause the dome cover to fall down.

⓬ Dome Cover
The dome cover is fragile. Take care when handling it.

⓭ Lens
The lens is not a replaceable item.

⓮ Camera Clamping Bracket
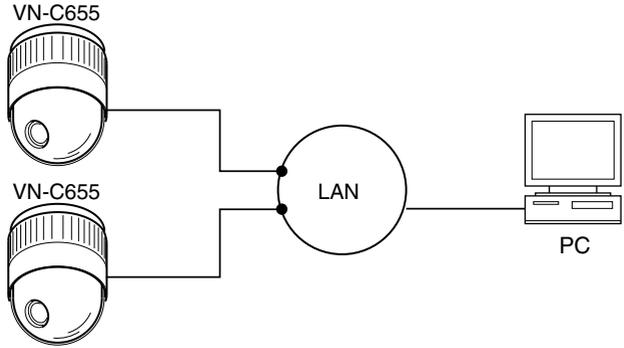In order to clamp the camera onto the Ceiling Mount, insert and tighten the **Locking Screw** ❷ into this bracket.

⓯ Drop Prevention Wire
Attach this wire to the Drop Prevention Hook ❽ on the Ceiling Mount.

Preparation

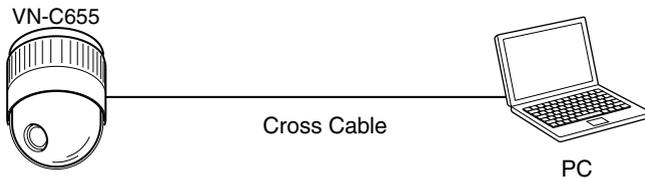## Connection Examples

LAN Connection

VN-C655

VN-C655

LAN

PC

Network Connection

VN-C655

VN-C655

LAN

INTERNET

FTP Server

PC

Images are automatically
updated at a regular interval.

PC
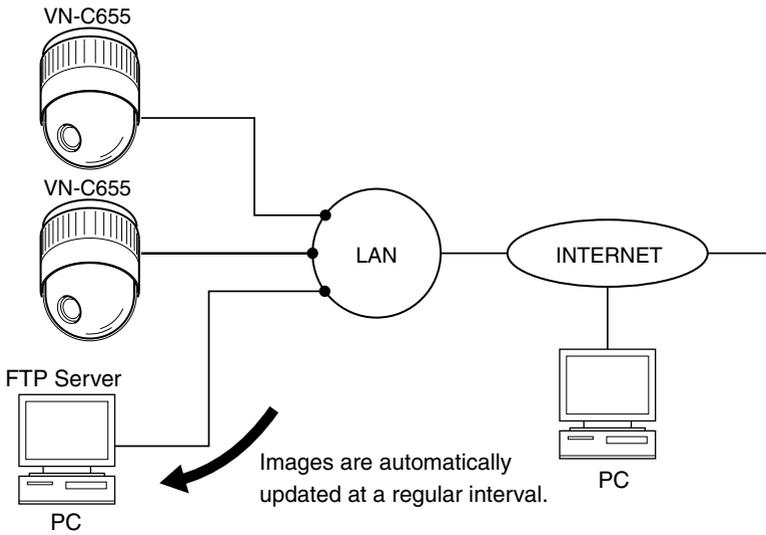
Peer-to-Peer Connection

VN-C655

Cross Cable

PC

Preparation Procedure

Set the camera in the following procedure.

Step 1 Connection/Installation

Firstly, make a hole in the ceiling, followed by connecting the power cable, LAN cable or alarm signal cable to the terminal of the ceiling mount of this camera. Next, attach the camera to the ceiling. Do not forget to attach the safety wire. ☞Page 14

Step 2 Network Settings

Install the software, set the network for this camera as well as using the "VN-C655U Setup Tool", and register the connected camera with the "V.Networks Controller". ☞Page 23

● In a system where more than 1 VN-C655 is used, turn on the power for a VN-C655 first, followed by setting the camera until "2-3 Setting IP Address for this Camera Using the 'VN-C655U Setup Tool' " is completed. Upon doing so, turn on a second camera and perform setting in the same way. Perform the same procedure for subsequent cameras.
(☞Page 18)

Step 3 Setting Using the V.Networks Controller

Perform settings for Auto Pan, Auto Patrol, Auto Trace, Image Quality and Alarm using the "V. Networks Controller" software that has been installed. ☞Page 54

Step 4 Operating Using the V.Networks Controller

The "V. Networks Controller" can also be used to perform recording/playback operations. ☞Page 78

Step 5 Operating Using a Web Browser

Operation is possible via a web browser. ☞Page 85

# Preparation (Step 1 Connection/Installation)

1-1 Connecting Cables

⚠ Cautions

- Attachment of a embedded cover in the ceiling (recess bracket) may be mandatory in certain regions. If this is so, ensure that the embedded cover (recess bracket) is securely attached before installing the camera.
- Ensure to attach the cover for the ceiling mount. Installation is not possible without attaching the cover. In addition, the cover also prevents penetration of foreign objects into the ceiling mount. Penetration of foreign objects may cause a malfunction or, in the worst scenario, cause smoking or fire.
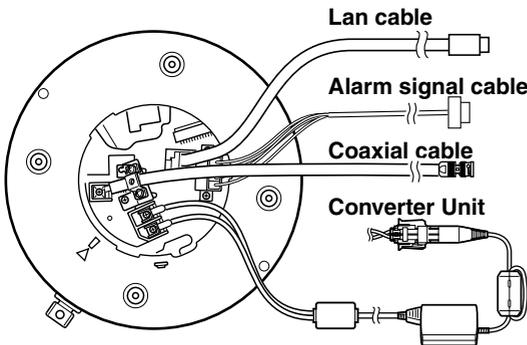
1. Making the hole

Make a hole for passing the connection cables through the inner side of the ceiling.
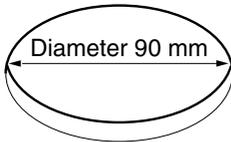
Diameter 90 mm

Make a 90 mm (3.5 inches) diameter hole in the ceiling. (☞Page 115)

2. Connect the cables

Connect the cables to the terminals on the Ceiling Mount.

Lan cable

Alarm signal cable

Coaxial cable

Converter Unit

The connection cables include Alarm Signal cable, LAN cable, coaxial cable and Converter Unit.

1. **LAN cable** (☞Page 16)
   Connect to the hub or PC.

2. **Alarm Signal cable** (☞Page 15)
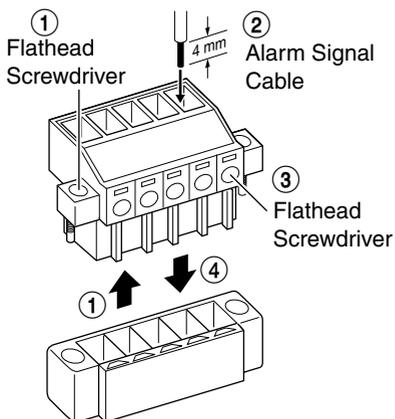   Connect to devices with an alarm output terminal.

3. **Coaxial cable** (☞Page 17)
   Connect to the monitor, etc.

4. **Converter Unit** (☞Page 18)
   Connect to AC 24 V power supply.

3. Connection to Alarm Input/Output Terminal

① Flathead Screwdriver

② Alarm Signal Cable

4 mm

③ Flathead Screwdriver

Connect the alarm input/output terminals to external devices such as sensors and buzzers.

① Loosen the screws on both edges of the terminal block using a flathead screwdriver, followed by dismantling it as shown in the left diagram.

② Strip the coating of the alarm signal cable by about 4mm before inserting it into the terminal.

③ Turn the screw on the side to fasten the alarm signal cable.

④ Upon fastening the alarm signal cable, re-install the terminal block that has been dismantled in Step 1.

Note

Cable Specifications
   50 m or shorter in length
   UL1007, UL1015 or equivalent
   AWG#22 to AWG#18 or equivalent

Caution

Due to external noise, the cable may not function properly even when the cable length is less than 50 m. In this case, use a shielded cable or take measures such as keeping the cable away from the noise source.

This terminal is for connecting with a sensor, infrared, door or metallic, or a manual switch.

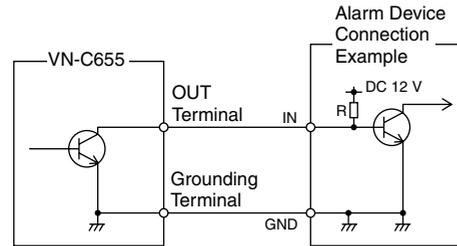

(Alarm Input Equivalent Circuit)
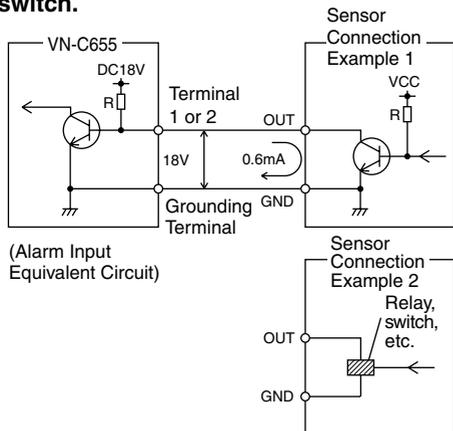
Input Requirements

● No-voltage relay input or NPN open collector input

● The polarity of the input detection can be selected via software.

● Make/Break/Toggle (at least 500 ms)

● Circuit current at low level: 0.6 mA

● Voltage applied at high level: 18 V

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1-1 Connecting Cables (Continued)

This terminal is for connecting with an alarm annunciator such as an indicator, a lamp or a buzzer.

Output Requirements
• Equivalent to NPN open collector output (The output logic is set with [V.Networks Setup Tool.])
• Allowed applied voltage: DC 12 V max.
• Allowed input current: 50 mA
• Momentary output: 1 to 5000 ms (The duration is set with [V.Networks Setup Tool.])

(Alarm Output Equivalent Circuit)

Caution

Connect the VN-C655 grounding terminal to the one of the annunciator.

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4. Connection of LAN Cables

Connect the camera to a hub or a PC by using a LAN cable.
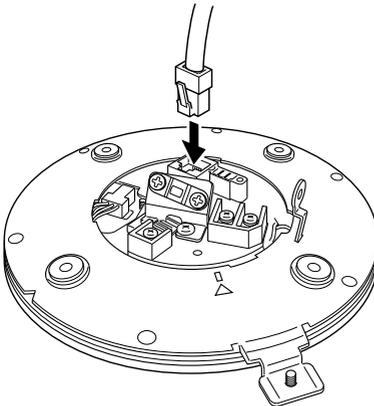
• **For hub connection**
  Use a straight cable.

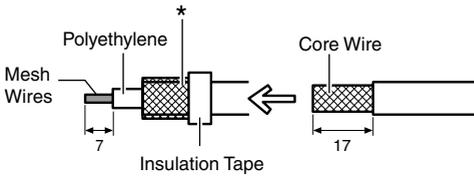• **For PC connection**
  Use a cross-over cable.

Caution

There are a few types of LAN board for which a cross-over cable cannot be used. Check the specifications of the LAN board to be used before performing connection.

Note

When using 100 BASE-TX, ensure to use a Category 5 (or higher) cable.

5. Connection of Coaxial Cables

Polyethylene

Mesh Wires

Core Wire

*

7

17

Insulation Tape

Connecting a 5C-2V or 3C-2V coaxial cable Strip the coaxial cable according to the diagram on the left. (Unit: mm)

Notes

- 7C-2V coaxial cables cannot be connected directly to the terminal block. In this case, make use of the 5C-2V cable as a junction cable by connecting it to this camera.
  - * Fold back the mesh wires and secure using an insulation tape to prevent them from becoming loose and causing a short circuit.
- Video output signal of the VIDEO OUT terminal is restricted to NTSC signals.
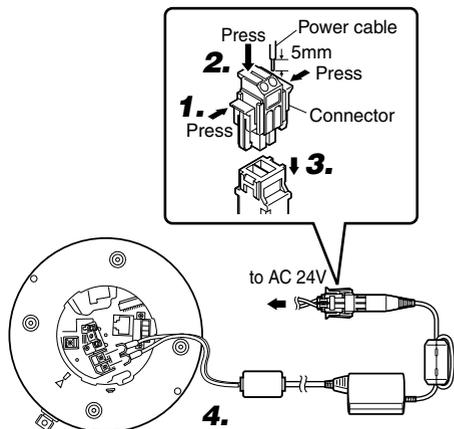

Provided screw

Provided cable plate

Screw removed in the figure on the left
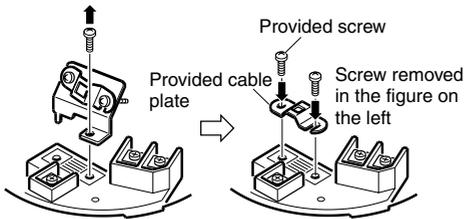
● When mounting the coaxial cable in parallel with the ceiling mount, remount the provided Cable plate as shown in the figure.

1-1 Connecting Cables (Continued)

6. Connection of Conveter Unit

Press — Power cable
2. 5mm
Press
1. Connector
Press
3.

to AC 24V

4.

Connect the camera to AC 24 V.

1. **Disconnect the connector from the supplied Converter Unit.**
It can be disconnected by pressing both ends as shown in the left figure.

2. **Mount the power cable to the connector.**
Strip the cover of the power cable (about 5 mm), while pressing down the arrow portion using a flat screwdriver, insert it into the connector.

3. **Mount the connector.**

4. **Connect the supplied Converter Unit to the DC 18V input terminal on the terminal stand.**

When a 2-conductor VVF (Vinyl-insulated vinyl-sheath cable) is used, the maximum connection length is as shown below. (These are merely the standard reference values.)

Maximum cable length	70 m	180 m	280 m	480 m
Wire diameter (mm)	1.0 or more	1.6 or more	2.0 or more	2.6 or more

Caution

- Connect with the appropriate power-supply voltage. The rated voltage for VN-C655 (Converter Unit) is AC 24 V, 50 Hz/60 Hz and shall be Class 2.
  If a voltage exceeding the rating is supplied, malfunction, or in the worst case, fuming or fire, may be caused.
- Installation shall be performed by qualified personnel according to regulations of individual regions.

Notes

Connecting multiple VN-C655 Cameras
In a system where more than 1 VN-C655 is used, turn on the power for a VN-C655 first, followed by setting the camera until "2-3 Setting IP Address for this Camera Using the 'VN-C655U Setup Tool' " is completed. Upon doing so, turn on a second camera and perform setting in the same way. Perform the same procedure for subsequent cameras.

- Default IP address setting for all VN-C655 cameras is 198.168.0.2. When the power for multiple cameras are turned on at one time under a single LAN environment, therefore, proper access may not be established due to IP address redundancy. Do not turn on the power of more than 1 camera at the same time.
- When IP address redundancy occurs, ensure that only one VN-C655 exists under a single LAN environment, and wait for some time (at least 10 minutes). In some cases, the power for all network devices under the same LAN environment may have to be turned off and on again to enable access to VN-C655.

1-2 Attachment of Ceiling Mount
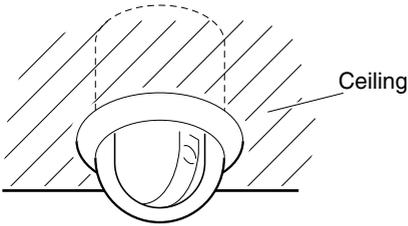
Ceiling

Embedded Cover in Ceiling (recess bracket)

• Attachment of a embedded cover in the ceiling (recess bracket) may be mandatory in certain regions. If this is so, ensure that the embedded cover (recess bracket) is securely attached before installing the camera.

• Please refer to the instruction manual for the cover in use for details on installation of the embedded cover (recess bracket).

• For more detail, please contact the JVC.

To a ceiling slab or channel

Safety wire hole

Ceiling Mount

Rubber seals
(Four on each side)
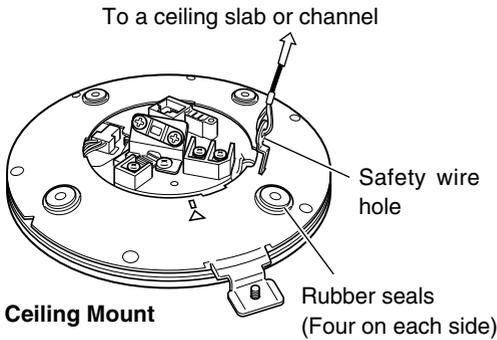
1. Attach safety wire to prevent camera from falling down

Connect the ceiling slab or channel to the ceiling mount using the wire to prevent the camera from falling down. Make use of the safety wire mounting hole to connect the ceiling mount and the wire.
(See diagram on the left)

⚠ Cautions

Choose a wire and ceiling structure with an appropriate strength and length that may prevent danger in case the camera falls down.

Notes

• Connect the wire so that it can be insulated from the ceiling structure.

  If the ceiling structure is made of a metallic material, improper insulation with the camera may cause noise interference in the images.

• Safety wires are not provided. Please purchase commercially available wires on a separate basis.

## 1-2 Attachment of Ceiling Mount (Continued)
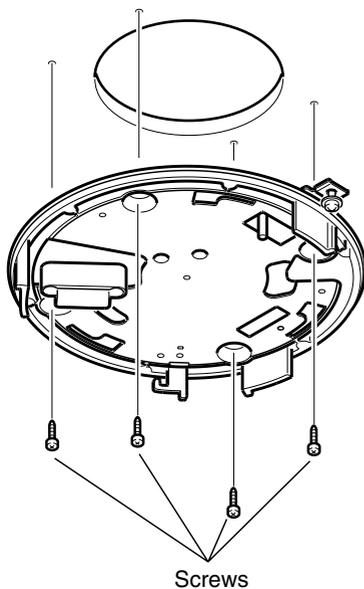
Screws

2. **Fasten the ceiling mount to the ceiling**

While taking care not to catch the connection cables, attach the Ceiling Mount to the ceiling using four screws (as shown in the diagram). Use 8-32 UNC-sized (M4-sized) screws or bolts. If woodscrews are used, use those with a diameter of 4.1 mm.

Notes

- Be sure to use 4 screws and attach them firmly.
- The seals attached to the ceiling-mount screw holes of the ceiling mount act as an insulator between the ceiling mount and the ceiling structure. If the ceiling structure is made of a metallic material, improper insulation with the camera may cause noise interference in the images. To prevent this from occurring, ensure proper insulation during installation.

1-3 Installing the Camera

Attach Drop Prevention Wire to this hook.

Drop Prevention Wire
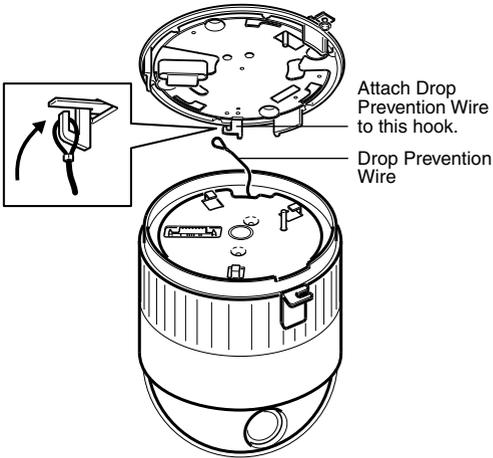
### 1. Attach the safety wire to prevent the camera from falling down

As shown in the diagram, pull out the safety wire from the camera and hang it to the safety wire fastening hook on the ceiling mount.

Be sure to connect the safety wire to prevent the camera from falling down.

⚠ Cautions

- Do not connect cameras other than VN-C655 to the ceiling mount. Doing so may cause the camera to malfunction.
- Be sure to connect the safety wire. Otherwise, the camera may fall to the ground.
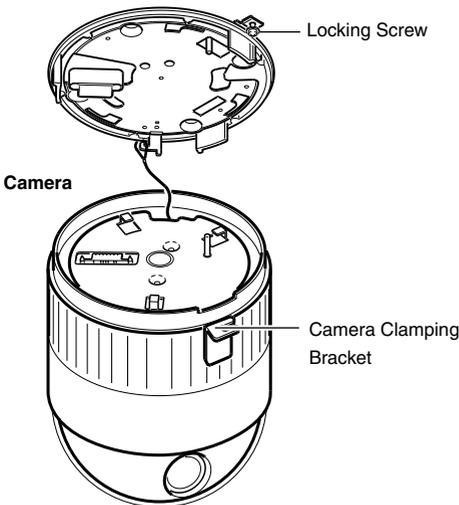
2. Check that the locking screw is loosened

The camera cannot be properly installed if the locking screw of the ceiling mount is not loosened.
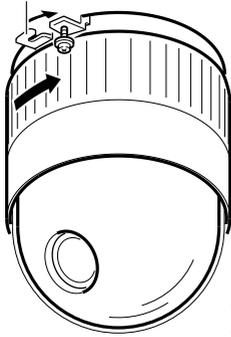
3. Fit the camera to the ceiling mount

Check the position of the camera clamping bracket and that of the locking screw, and fit the camera to the Ceiling Mount.

Ceiling Mount

Locking Screw

Camera

Camera Clamping Bracket

1-3 Installing the Camera (Continued)

Camera clamping bracket

Rotate the
camera
clockwise.

4. Turn the camera

Make sure that the camera is horizontal, followed by fitting the camera to the ceiling mount and turning it in the clockwise direction until it stops. Upon doing so, check that the the camera clamping bracket is aligned with the position of the locking screw of the ceiling mount.
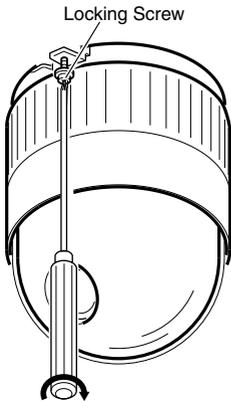
Locking Screw

5. Fasten the locking screw

Fasten the locking screw using a flathead screwdriver.

⚠ Cautions

If the locking screw is not securely fastened, the camera may vibrate or fall down.
Be sure to fasten the locking screw firmly.

Tighten the locking screw.

* To dismantle the camera, perform procedure from steps **1** to **5** in the reverse order.

Settings (Step 2 Network Settings)

2-1 Installing the Software

To operate this camera, you will have to install the necessary software according to the following procedure from the CD-ROM supplied.

Installing the V.Networks Controller

1. Execute "Setup.exe" in the [JVC] folder.
2. Follow instructions on the screen to install the software.
3. If installation is successful, the → "V.Networks Controller" icon will be displayed in the [Start] → [Programs] [V. NETWORKS] folder.

Installing the VN-C655U Setup Tool

1. Execute "Setup.exe". This is located inside the [Setup] folder of the [JVC] folder.
2. Follow instructions on the screen to install the software.
3. If installation is successful, the → "VN-C655U Setup Tool" icon will be displayed in the [Start] → [Programs] [V. NETWORKS] folder.

2-2 Setting PC's IP Address [Windows XP]

Upon installing the camera, set the IP address of the PC that is used to operate this camera.

For Windows XP, set according to the following procedure.
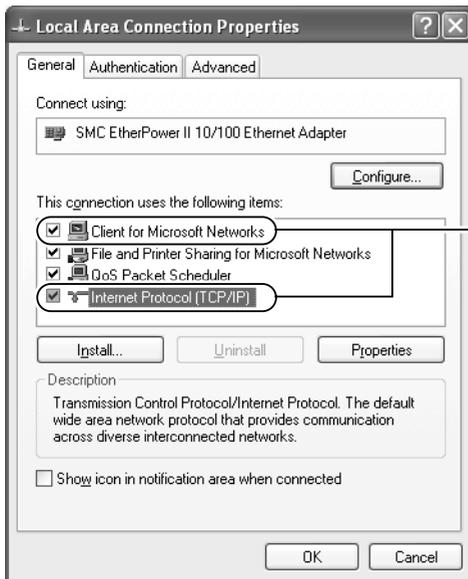
(For Windows 2000, ☞ Page 26)

Note

Under a DHCP environment and when the IP address assigned to V. Networks is already known, it will not be necessary to perform 2-2 "Setting PC's IP Address" as the PC's IP address is automatically acquired from the DHCP server.

1. **Click** **Start** .

• Right-click on [My Network] and select [Properties].

2. **Slect the network for which the PC that operates this camera is connected to.**

• Right-click to select [Properties].

Local Area Connection Properties	? X

General | Authentication | Advanced

Connect using:

SMC EtherPower II 10/100 Ethernet Adapter

Configure...

This connection uses the following items:

☑ Client for Microsoft Networks
☑ File and Printer Sharing for Microsoft Networks
☑ QoS Packet Scheduler
☑ Internet Protocol (TCP/IP)

Install... | Uninstall | Properties

Description

Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

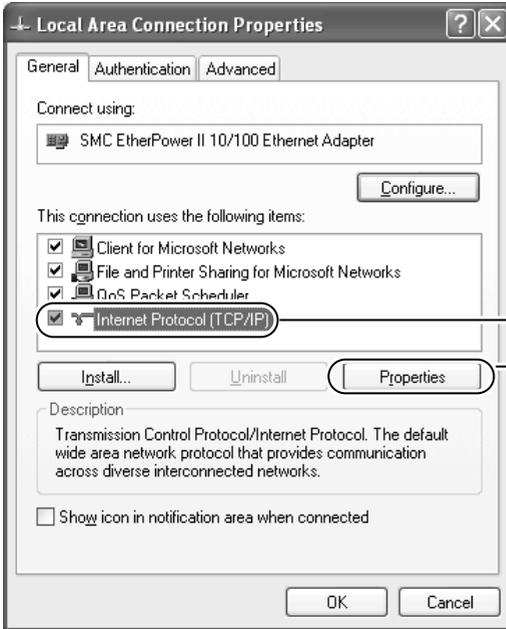☐ Show icon in notification area when connected

OK | Cancel

☑ Ensure that it is selected.

Note

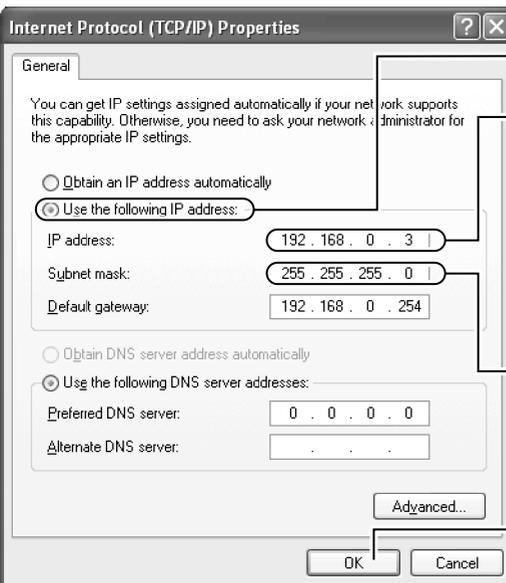Select "Install (N) ..." if [Client for Microsoft Networks] or [Internet Protocol (TCP/IP)] is not displayed.

3. **Select [Internet Protocol (TCP/IP)] and click [Properties].**

Local Area Connection Properties [?][X]

General | Authentication | Advanced

Connect using:

SMC EtherPower II 10/100 Ethernet Adapter

Configure...

This connection uses the following items:

☑ Client for Microsoft Networks
☑ File and Printer Sharing for Microsoft Networks
☑ QoS Packet Scheduler
☑ Internet Protocol (TCP/IP) ⟶ ① Select [Internet Protocol (TCP/IP)].

Install... | Uninstall | Properties ⟶ ② Click [Properties].

Description

Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

☐ Show icon in notification area when connected

OK | Cancel

4. **Select [Use the following IP address], set the [IP address] and [Subnet mask] and click** [OK] **.**

Internet Protocol (TCP/IP) Properties [?][X]

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically ⟶ ① Select [Use the following IP address].
⊙ Use the following IP address:

IP address: 192 . 168 . 0 . 3 ⟶ ② Set [IP address] to 192.168.0.3.

Subnet mask: 255 . 255 . 255 . 0

Default gateway: 192 . 168 . 0 . 254

Note

• Make sure to note down the original IP address before changing.
• Do not use the same IP address elsewhere within the same network environment.

○ Obtain DNS server address automatically
⊙ Use the following DNS server addresses:

Preferred DNS server: 0 . 0 . 0 . 0 ⟶ ③ Set Subnet mask to an appropriate value. Ask the network administrator if necessary.

Alternate DNS server: . . .

Advanced...

OK | Cancel ⟶ ④ Click [OK].

5. **Click** [OK] **on the [Local Area Connection Properties] screen.**

2-2 Setting PC's IP Address [Windows 2000]

Upon installing the camera, set the IP address of the PC that is used to operate this camera. For Windows 2000, set according to the following procedure.

1. **Click** **Start** .
   • Select [Settings] and click [Properties].

2. **Double-click [Network and Dial-up Connection].**

3. **Double-click [Local Area Connection].**

① Click Properties .

② Select [Internet Protocol (TCP/IP)].

③ Click Properties .
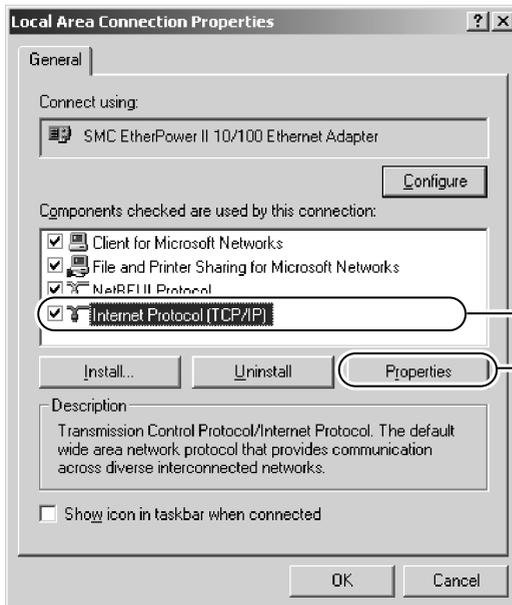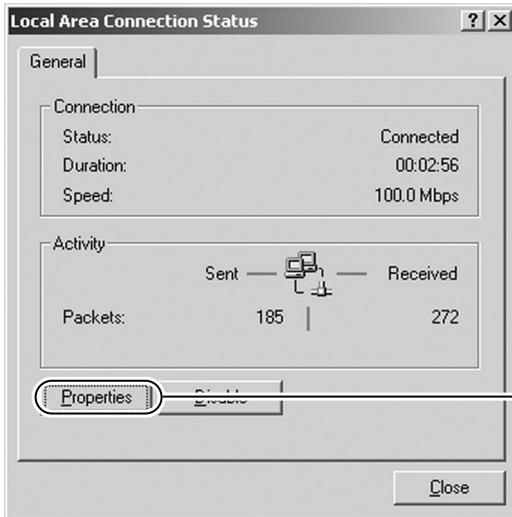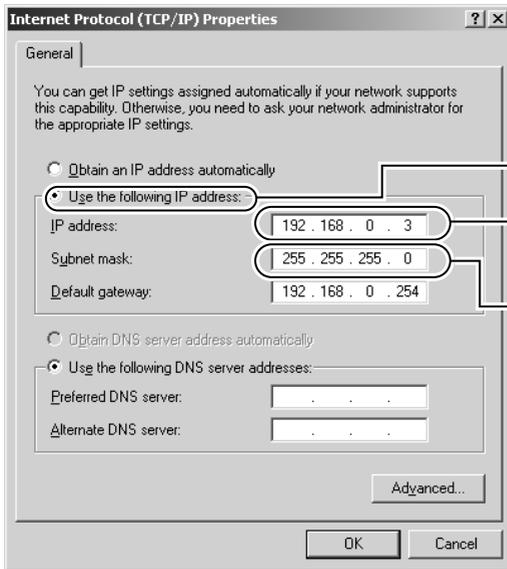
④ Select [Use the following IP address].

⑤ Set [IP address] to 192.168.0.3.

⑥ Set Subnet mask to an appropriate value. Ask the network administrator if necessary.

4.Click OK **.**

2-3 Setting IP Address for this Camera Using the "VN-C655U Setup Tool"

Set the IP address for VN-C655 using the "VN-C655U Setup Tool" that has been installed.

**(This "VN-C655U Setup Tool" only allows connection of VN-C655.)**

Caution

- Upon turning on the power of this camera, it may take about 60 seconds before it can be connected to the PC.
- At the factory, DHCP is enabled for VN-C655.
- Using DHCP

  JVC does not recommend operating VN-C655 with the DHCP function enabled because a different IP address may be assigned upon the renewal of the leasing contract. The DHCP function of VN-C655 is included with the aim to simplify installation/setting procedures.

Note

- To connect to a VN-C655 for which DHCP has been enabled, the DHCP server must exist in an environment where the assigned IP address and MAC address are clearly defined. If the DHCP server is not found, it will automatically start up using the static IP address after 60 seconds.

1. **Select [Start] → [Programs] → [V.NETWORKS] → [VN-C655U Setup Tool] to start up the "VN-C655U Setup Tool".**
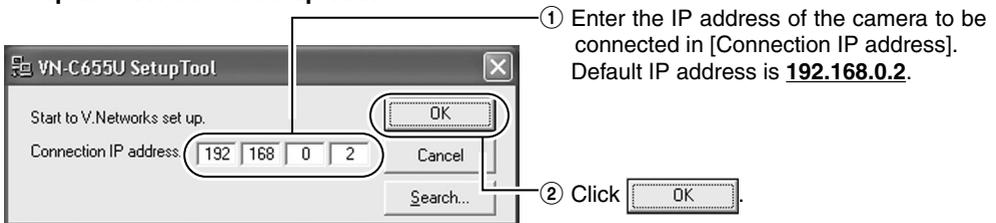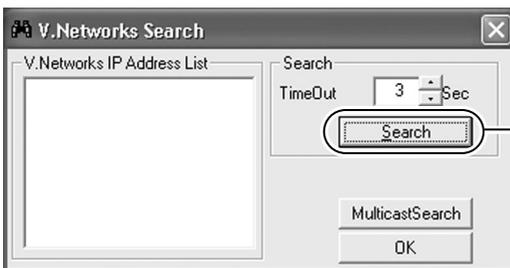
① Enter the IP address of the camera to be connected in [Connection IP address]. Default IP address is **192.168.0.2**.

② Click [OK].

Note

To view the IP address of the connected camera, click "Search".

The [V.Networks Search] screen is displayed.

Click [Search] to start search and a [V.Networks IP Address List] will appear.

- [TimeOut] is for setting the time for searching (1 to 30 seconds). If no IP address is displayed upon searching, change the value to a longer time and search again.
- If the [V.Networks] on the LAN has a different subnet from that of the PC, connection may not be possible even if the IP address of the camera is found via search. Change the IP address of the PC to an appropriate value and connect the camera.

2. Check settings.
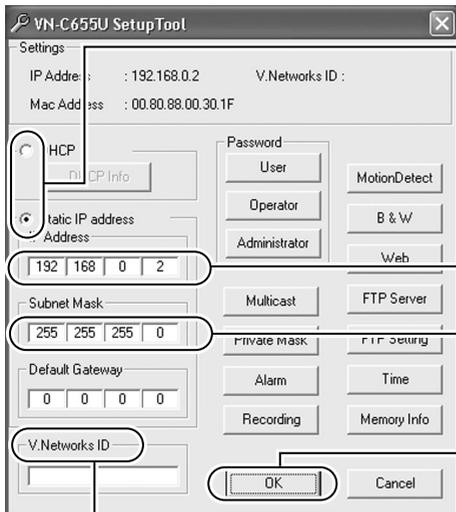
① Select whether to use DHCP.

Note

The IP address of the DHCP server and other information can be checked when [DHCP] is selected.

② Change the IP address to the one assigned to or approved by the administrator.

③ Set Subnet mask to an appropriate value. Ask the network administrator if necessary.

④ Click [OK].

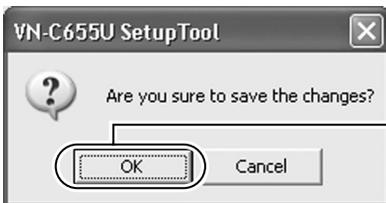For other settings, ☞ next page

[V.Networks ID] works as an identification code set to VN-C655. Only alphanumeric characters can be used.
This ID does not directly affect operation by the user.
Normally, the ID is set as CAM00001, CAM00002, etc.
(0 to 8 characters)

3. Click [OK].

VN-C655U SetupTool

? Are you sure to save the changes?

OK   Cancel

Click [OK].

4. Start up the "V.Networks Controller".

(☞ Page 54)

Note

Upon clicking OK, VN-C655 will be automatically reset and the set values will be enabled.
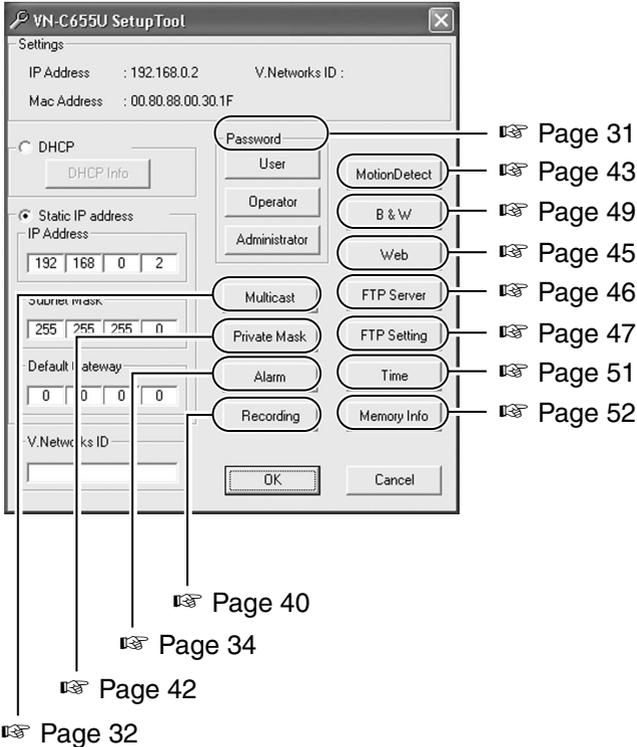
Note

In a system where more than 1 VN-C655 is used, turn on the power for a VN-C655 first, followed by setting the camera until "2-3 Setting IP Address for this Camera Using the 'VN-C655U Setup Tool' " is completed. Upon doing so, turn on a second camera and perform setting in the same way. Perform the same procedure for subsequent cameras.

2-4 Other Settings Using the "VN-C655U Setup Tool"

Perform setting of details other than the IP address using the "VN-C655U Setup Tool" that has been installed.

1. **Select [Start] → [Programs] → [V.NETWORKS] → 🔲 [VN-C655U Setup Tool] to start up the "VN-C655U Setup Tool".**

☞ Page 31
☞ Page 43
☞ Page 49
☞ Page 45
☞ Page 46
☞ Page 47
☞ Page 51
☞ Page 52

☞ Page 40
☞ Page 34
☞ Page 42
☞ Page 32

2. **Refer to the relevant pages (☞) for setting of other details.**

PCs (users) connected to this camera are regulated via an access protection function which requires a password entry.

**Passwords can be set or canceled using the "VN-C655U Setup Tool".**

A different password can be set for each of the 3 authorization levels, namely user, operator and administrator.

Authorization Level	Allowed Access
User	Viewing of motion images only
Operator	All operations using the V.Networks Controller
Administrator	All of the above and all settings using the VN-C655U Setup Tool

Note

Do not forget the passwords as canceling or changing of passwords is not possible unless the current and correct password is entered.

1. **Start up the "VN-C655U Setup Tool", followed by selecting [User], [Operator] or [Administrator] under [Password] setting.**
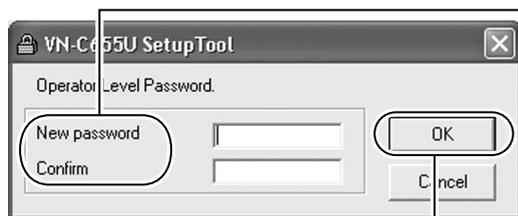
① Enter a password to set password protection or to change a password. Characters entered are displayed as ∗.
- Enter the same password in both the upper and lower boxes.
- Password must be alphanumeric and not longer than 8 characters.

Note

To cancel the password setting, leave the entry box blank and click OK.

② Click OK.

2. **The following confirmation screen will be displayed.**

Click OK.

Notes

- For a password-protected VN-C655, a password request screen will be displayed.
- VN-C655 setup will not be possible unless the correct administrator password is entered.
- Security level increases in the order from user to operator to administrator. Password protection will not be valid if a password is assigned only to a lower level but not to a higher one.
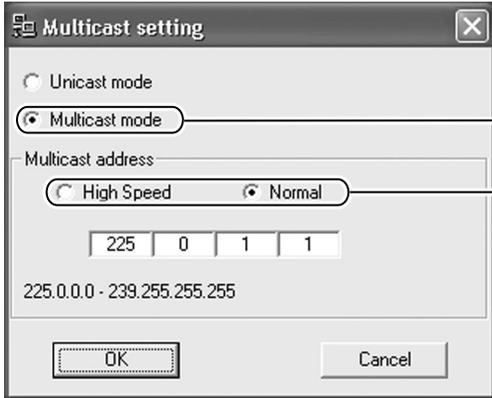
2-4 Other Settings Using the "VN-C655U Setup Tool" (2. Multicast)

Selecting Multicast mode allows VN-C655 to send the same image data to multiple PCs on the network at one time without lowering the frame rate.

1. **Start up the "VN-C655U Setup Tool" and select [Multicast].**

The [Multicast Setting] screen will be displayed.

① Select [Multicast Mode].

② Select the mode for acquiring images.
Normal : Set to Normal when using a narrow bandwidth network.
High Speed : A maximum transmission rate of 30 fps is possible for 640 x 480 images.

Notes

- Images are divided into IP fragments when set to High Speed.
- Do not set to High Speed for narrow bandwidth networks.
- Maximum data transmission capacity is 8Mbps.Even when High Speed is selected, a maximum rate of 30 fps may not be possible for 640 x 480 images depending on the image size.
- The MTU(Maximum Transmission Unit) sizes during image acquisition are as follows.

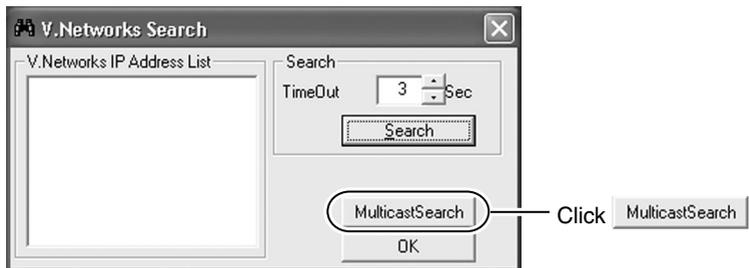| Transmission Mode	MTU Size (Bytes)
Normal	1430 Bytes
High Speed	1500 Bytes

Multicast

- Set the multicast address within the range between 225.0.0.0 to 239.255.255.255. Do not set the same multicast address for different devices on the same system.
- To view VN-C655 images in the multicast mode through a router, either the following operating environment or router setting will be required.
  ① The router supports IGMP Ver2 and is synchronized with the starting and stopping of the multicast transmission, and the router settings can be dynamically changed.
  ② If the router does not support IGMP Ver2, a static route for multicast must be set to the router.
- When there are multiple cameras on the same subnet that are set to the multicast mode, set up a network using a hub that supports the IGMP snooping feature.

It is possible to search for the multicast address of a VN-C655 that is connected to the network.
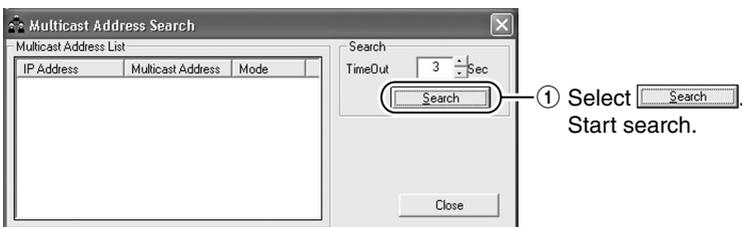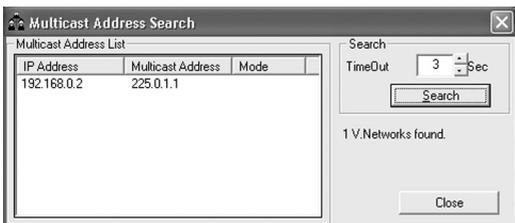
1. **Start up the "VN-C655U Setup Tool".**

VN-C655U SetupTool	
Start to V.Networks set up.	OK
Connection IP address. 192 168 0 2	Cancel
	Search...

Click Search... .

2. **The [V.Networks Search] screen is displayed.**

V.Networks Search

V.Networks IP Address List

Search
TimeOut 3 Sec

Search

MulticastSearch

OK

Click MulticastSearch .

3. **The [Multicast Address Search] screen is displayed.**

Multicast Address Search

Multicast Address List

IP Address	Multicast Address	Mode

Search
TimeOut 3 Sec

Search

① Select Search .
Start search.

Close

4. **The search result is displayed.**

Multicast Address Search

Multicast Address List

IP Address	Multicast Address	Mode
192.168.0.2	225.0.1.1	

Search
TimeOut 3 Sec

Search

1 V.Networks found.

Close

2-4 Other Settings Using the "VN-C655U Setup Tool" (3. Alarm Setting)

**This section describes procedures for alarm setting.**

Alarm Input

• When there is an input of signals to the alarm input terminal on the ceiling mount.
  (☞ Page 15 "Alarm Input Terminal")
• When motion is detected. (☞ Page 43 "Motion Detection Setting")
• Upon movement to a new position.
• When there is a change in the Black & White mode.

Operation when an alarm input is activated

• Output signals are sent from the alarm output terminal on the ceiling mount.
  (☞ Page 16 "Alarm Output Terminal")
• Alarm packets are sent to the PC. (☞ Page 37 "Message Packet")
• The camera shifts in position.
• Black & White mode changes.
• Images are uploaded to the FTP server. (☞ Page 47 "FTP Client Setting").

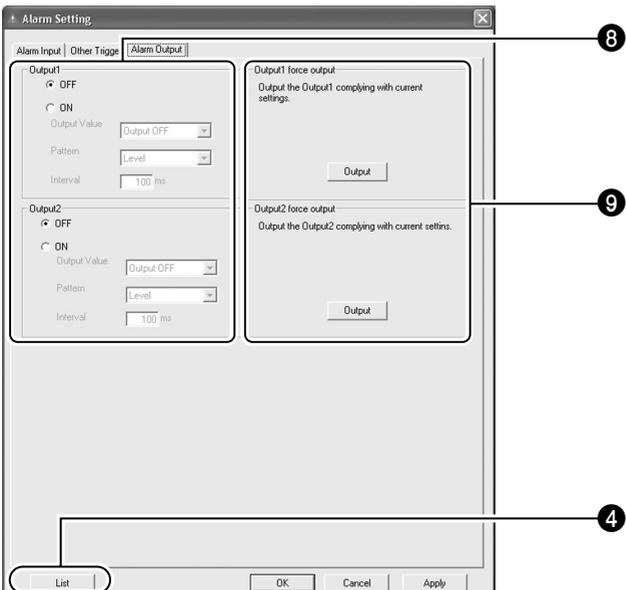### *1.* **Start up the "VN-C655U Setup Tool" and select [Alarm].**
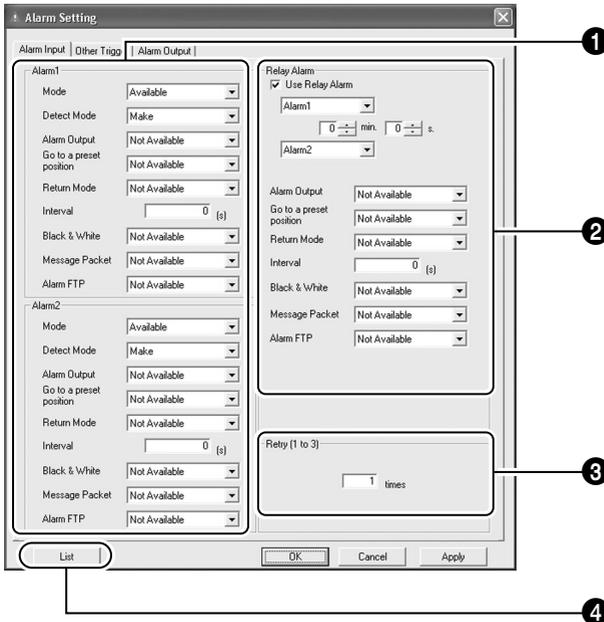
2. Click the [Other Triggers] tab on the [Alarm Setting] screen.
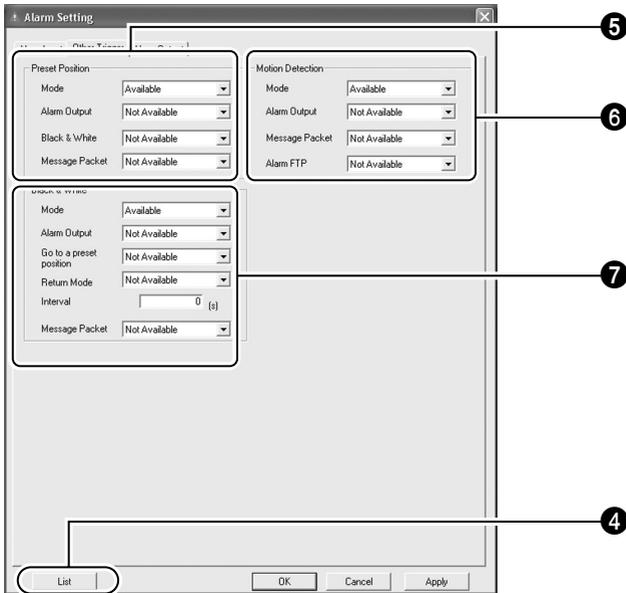
3. When setting is complete, click [Apply] followed by [OK].

4. Click the [Alarm Output] tab on the [Alarm Setting] screen.

5. When setting is complete, click [Apply] followed by [OK].

2-4 Other Settings Using the "VN-C655U Setup Tool" (3. Alarm Setting) (Continued)

■ Alarm Input

Item	Function/Set Value	Initial Value
❶ **Alarm 1/Alarm 2**	This section describes setting procedures for alarm input.	—
Mode	For selecting whether to enable or disable the input signals. **Set Values** : Available, Not Available	Not Available
Detect Mode	For selecting the method for detecting input signals. **Make** : Detect input signals at the "Make" contact point. **Break** : Detect input signals during "Break". **Toggle** : Detect input signals at both "Make" and "Break".	Make
Alarm Output	For selecting whether to output from the alarm output terminal when there is alarm input. **Not Available** : Do not output from the alarm output terminal. **Alarm Output 1** : Send output from the Alarm Output 1 terminal. **Alarm Output 2** : Send output from the Alarm Output 2 terminal. **Note** • Unless the alarm output in the "Alarm Output" tab is enabled, this function will not be activated even if alarm output is selected in the alarm input settings. (☞ Page 39)	Not Available
Go to a preset position	For setting whether to move to the preset position when there is alarm input. **Not Available** : Do not move to the preset position. **Home** : Move to the home position. **1 to 99** : Move to the preset position.	Not Available
Return Mode	For setting whether to return the camera that has moved to the preset position upon the alarm input back to the home position. Use [Return Interval] to set the time interval before returning the camera to its home position. **Not Available** : Do not return to home position. **Return** : Return to home position. **Event** : Return to home position if operation is not in the manual mode.	Not Available
Interval	For setting the time interval before the camera returns to its home position when [Return Mode] is set to "Return". **Set Value** : 0 to 65535 sec	0
Black & White	For switching from the Color to Black & White mode when there is alarm input. **Not Available** : Do not switch between Black & White/Color mode. **Color** : Color mode at all times. **Black & White** : Black & White mode at all times. **Auto** : Switch automatically between Black & White and Color mode according to the brightness of the object. **Note** • When Auto is selected, switching may fail in some cases due to the lighting conditions or angle of view. In order to ensure that switching is properly performed, it is recommended that signals from an external sensor (sold separately) be input to the alarm terminal of this camera.	Not Available

Item		Function/Set Value	Initial Value
❶ **Alarm 1/Alarm 2**		(Continued)	—
	Message Packet	For setting whether to send alarm packets to the PC when there is alarm input. **Not Available** : Do not send alarm packets. **Available** : Send alarm packets.	Not Available
	Alarm FTP	For operation according to the [Alarm FTP] in the FTP Client feature when there is alarm input. Please refer to FTP Client Settings (☞ Page 47) for details on alarm FTP. Set Values: Available, Not Available	Not Available
❷ **Relay Alarm**		Set here to enable the relay alarm function, which is activated when 2 alarms are received within a preset time interval. The sequence and time interval for the alarm input can be specified. When [Alarm Output] is selected, alarm signal output will be sent to the alarm output terminal on the ceiling mount according to the output port settings. **Notes** • A second alarm input enables this relay alarm function, and alarm will not be activated for this second input. • Unless the alarm output in the "Alarm Output" tab is enabled, this function will not be activated even if alarm output is selected in the alarm input settings. (☞ Page 39)	Not Available
	• **Alarm Output** • **Go to a preset position** • **Return Mode** • **Interval** • **Black & White** • **Message Packet** • **Alarm FTP**	* Please refer to the [Alarm 1/2] item for details on the set values.	*Please refer to the [Alarm 1/2] item for the initial values.
❸ **Retry (1 to 3)**		For setting the no. of times alarm notification is to be sent to the "V.Networks Controller". (Set Value: 1 to 3) **Note** • Alarm notification may fail, depending on the LAN environment in use. If it fails, set the value for alarm notification to "3". In this case, alarm by the "V.Networks Controller" itself is set off only once.	1
❹ **List**		Press here to display the IP address of the PCs to which an alarm notification is sent. ("Distribution Address List" Screen) To delete a distribution address, select the IP address to delete, followed by pressing the Delete button. **Notes** • The list allows setting of up to 10 addresses. • Message packets will not be sent out when there are 11 or more addresses.	—

2-4 Other Settings Using the "VN-C655U Setup Tool" (3. Alarm Setting) (Continued)

■ **Other Triggers**

Item		Function/Set Value	Initial Value
❺ **Preset Position**		For performing the following operations by using movement to preset positions as triggers.	—
	• **Mode** • **Alarm Output** • **Black & White** • **Message Packet**	*Please refer to the [Alarm 1/2] item for details on the set values.	*Please refer to the [Alarm 1/2] item for the initial values.
❻ **Motion Detection**		For setting alarm operations when motion is detected within the area specified in the motion detection settings.	—
	• **Mode** • **Alarm Output** • **Message Packet** • **Alarm FTP**	*Please refer to the [Alarm 1/2] item for details on the set values.	*Please refer to the [Alarm 1/2] item for the initial values.
❼ **Black & White**		For performing the following operations by using switches between the Color and Black & White modes as triggers.	—
	• **Mode** • **Alarm Output** • **Go to a preset position** • **Return Mode** • **Interval** • **Message Packet**	*Please refer to the [Alarm 1/2] item for details on the set values. **Note** • The Black & White alarm may be activated upon restarting VN-C655.	*Please refer to the [Alarm 1/2] item for the initial values.

■ Alarm Output

| Item		Function/Set Value	Initial Value
❽ **Output 1/ Output 2**		This section describes the setting procedures for alarm output. **Set Values** : ON, OFF	OFF
	Output Value	Select the alarm output method. **Output OFF** : Output alarm signals when the Alarm Output 1 or Alarm Output 2 terminal is connected to the GND terminal. **Output ON** : Output alarm signals when the Alarm Output 1 or Alarm Output 2 terminal and the GND terminal are disconnected from each other.	―
	Pattern	**Level** : Continue output of alarm signals throughout the alarm input process. **Momentum** : Output alarm signals only at the specified time. Specify time using the Return Interval item.	―
	Interval	For setting the output interval when the Output Pattern item is set to Momentum. This is disabled when the Output Pattern item is set to Level.	―
❾ **Output 1 force output/ Output 2 force output**		Upon pressing the Output button, alarm signal output will be sent from the alarm output terminal on the ceiling mount. This is used for checking the alarm operation. **Notes** • Output is disabled when the Output Pattern item is set to "Level".	―

2-4 Other Settings Using the "VN-C655U Setup Tool" (4. Recording Setting)

This function records the image to the memory of VN-C655 when an alarm is activated.

● When an alarm is activated, image recording can be carried out in one of the following two ways. One way, local recording, saves images to the VN-C655 memory, and the other record images with [V.Networks Controller] and saves them to the PC hard disc drive, etc. (☞ Page 67)

1. **Start up the "VN-C655U Setup Tool" and select [Recording]. To make new values effective, click on [Apply], followed by [OK].**

● **Setting the [Trigger Recording] screen**
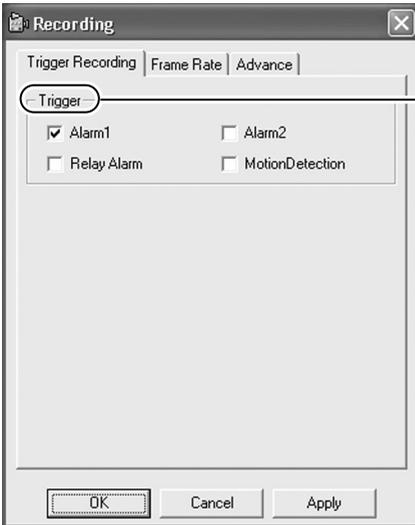
① Select alarm input signal "Trigger" for starting local recording.

② To set the frame rate for local recording, select "Change the Recording Frame Rate during trigger recording", followed by selecting the frame rate accordingly. Default frame rate is set at 10 fps. A frame rate of 10 fps for recording will be used when this box is not checked. (Set values: 30, 15, 10, 8, 6, 5, 4, 3, 2, 1)

● **Setting the [Frame Rate] screen**

③ For setting the recording time. This can be set up to 30 seconds before and 60 seconds after the alarm input.

Cautions

● [Before trigger] and [After trigger] values cannot be set to "0" at the same time.
● Due to the memory capacity of VN-C655, recording time set for [Before trigger] and [After trigger] may differ from the actual maximum recording time.

(Example)
If 320x240 (15 fps)/640x480 (5 fps) with a compression rate of 2, the actual recording time is 5 to 0 and 30 to 35 seconds, before and after a trigger respectively.

④ For setting the priority.
Frame Rate : Priority is given to frame rate settings.
Recording Time : Frame rate is automatically adjusted such that recording can be performed according to the specified recording time.

● **Setting the [Advance] screen**

④ For setting the recording action when the memory capacity for recording has become full. One of the following actions can be selected. (Internal memory capacity is 8 MB.)
- Stop recording until a free memory space for recording is created.
- Remove old files that have exceeded a specific number of days. (If the number of days is set to "0", files will be deleted starting with the oldest one.)

Cautions

● When record setting that exceeds the recording capacity is performed with [Remove old files] set to "0 days", recorded files will not be retained. To retain the files, change the value for [Remove old files] or alter the record settings.

Notes

Recording time
While maximum recording time varies with the recording frame rate and image size, recording over a specified length of time may not be possible depending on the compression level and object.
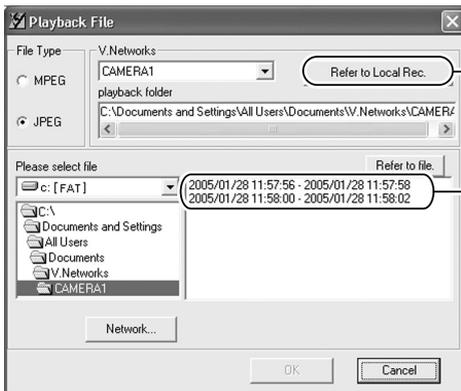
Recording files
A trigger-recording file is created each time a trigger occurs. If successive triggers occur over a continuous period of time, these will be recorded into 1 file.

Cautions

Loading local recording images to the PC

Rec files containing local recording images may also be uploaded automatically to the FTP server. (☞ Page 47, "Rec File")

Perform the following procedure to load local recording images to the PC.

① Select [Refer to Local Rec.].

② Select the file to load.

③ Right-click on the selected file and select [Download to PC].

To obtain information on whether local recording has started, check the [Trigger] box on the [Recording] screen, followed by setting [Message] in [Alarm Setting] of the V.Networks Controller. (☞Page 68)

2-4 Other Settings Using the "VN-C655U Setup Tool" (5. Private Mask Setting)

Use the Private Mask function to gray out areas on the screen that are to be excluded during shooting. Up to 4 private masks can be set for each display screen and a total of 8 private masks for each camera.

1. Start up the "VN-C655U Setup Tool" and select [Private Mask].

The [Private Mask] screen will be displayed.
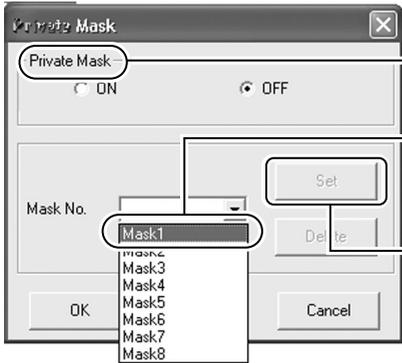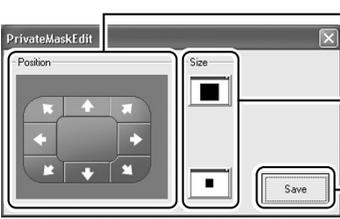
① Set [Private Mask] to "ON". (Default value: "OFF")

② Select a number between Mask Nos. 1 to 8 to perform private mask setting.

③ Click [Set].
A controller for setting the private mask will be displayed, and a mask area (gray color) will appear on the live screen.
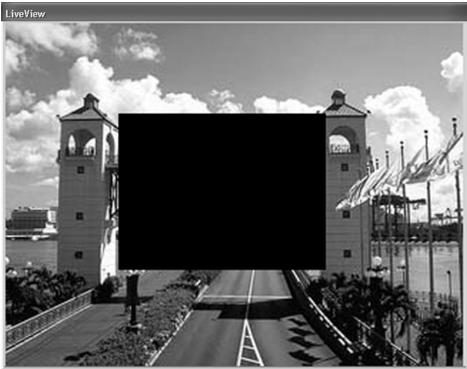
④ Move the mask area (gray color) to the center of the area to be masked using the position pad.

⑤ Use the Size buttons to set the range of the mask area.

⑥ Upon determining the mask area, click [Save] to save the setting.
To set multiple mask areas, repeat procedures from ② through ⑥.

(Controller Used for Private Mask Setting)

Notes

● Even when private mask is set, mask area (gray color) will not be displayed on the screen in the following cases.
  • When the camera's tilt angle it 40° or larger.
  • When there are 5 or more mask areas set on the screen.
● Objects within areas for which private mask has been set may still be seen, depending on the orientation of the camera and the zoom position. As such, ensure that the range of area for which private mask has been set cannot be seen by moving the orientation of the camera and the zoom position upon setting. In the case when objects within the private mask area are seen, enlarge the mask area.
● The private mask function will not run properly during the initial operation of the camera immediately after its power has been turned on.
● For screens that contain 5 or more preset masks, the entire screen will be masked.

2. When all the settings have been completed, click [OK] to end.

2-4 Other Settings Using the "VN-C655U Setup Tool" (6. Motion Detection Setting)

For setting the motion detection function, which activates the alarm when there is motion in the camera image. Perform the following procedure to set area for motion detection.

1. **Start up the "VN-C655U Setup Tool", select [Alarm Setting] and set [Motion Detection] to "Available". (☞ Page 38 "Other Trigger")**

2. **Select [Motion Detect] under [VN-C655 Setup Tool].**
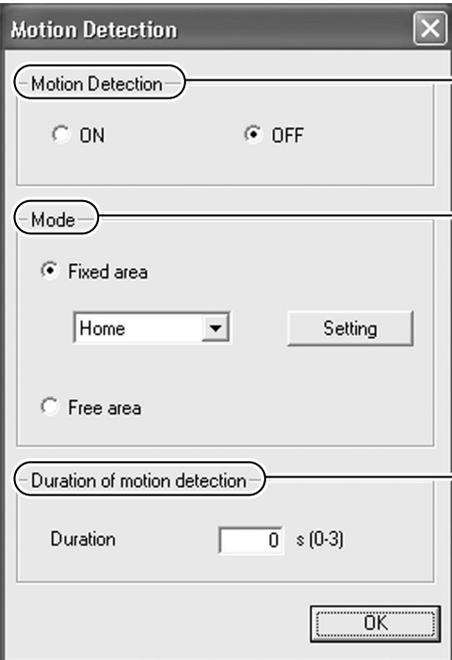
Motion Detection [X]

- Motion Detection -
  - ○ ON   ● OFF

① Select "ON" to turn on the motion detection feature.

- Mode -
  - ● Fixed area
    - [Home ▼] [Setting]
  - ○ Free area

② Set the detection mode.
Fixed area
Set motion detection only for a specific area. Select a preset position, followed by clicking Setting. The Motion Detection Setting screen will be displayed.
(Set values: Home, Position 1 to Position 99)
Free area
Motion detection is activated for all areas.

- Duration of motion detection -
 - Duration   [0] s (0-3)

③ For setting the time interval for defining a motion.
When there is intensive motion throughout the entire screen, lengthening the time interval will help to prevent false detection.
(Set value: 0 to 3)

[OK]

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2-4 Other Settings Using the "VN-C655U Setup Tool" (6. Motion Detection Setting) (Continued)

3. Perform area setting.

Image of the position that is selected as the Fixed area in ② of Step *2* will be displayed.
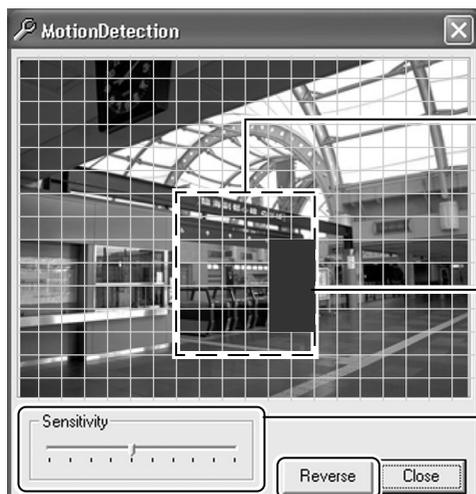
① Click and drag the mouse to select the detection area. To cancel the detection area (displayed in yellow), right-click and drag the mouse.

Area for which motion is detected will be displayed in red.

② For setting the sensitivity level of motion detection.
Drag towards the right to increase and left to decrease the sensitivity level.

Upon clicking Reverse , area other than that selected in ① will be selected as the motion detection area and displayed in yellow.

Notes

- The area display position only serves as a guide. Ensure to perform operation check.
- Each screen is divided into 300 (20x15) blocks. Adjust the zoom ratio of the lens such that the object for which motion is to be detected is at least the size of multiple blocks.
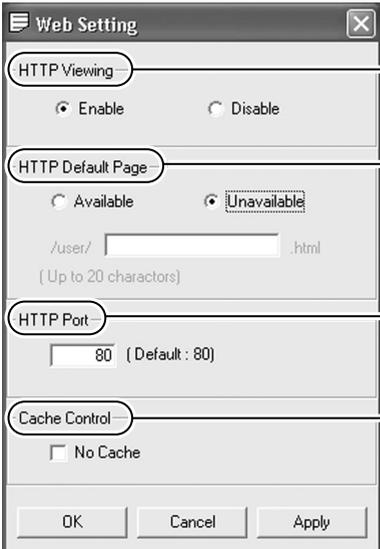

Cautions

- Flickering lights may cause false detections in motion when the camera is connected.
- When brightness varies due to the use of the auto iris function or lighting conditions, this may be detected as motion. In this case, it is recommended that the detection time be set to a value other than "0".
- When automatic control is enabled, false detection may occur at the instant when the camera starts to move. In this case, it is recommended that the detection time be set to a value other than "0".
- Note that the motion detection function is not designed to prevent theft or fire. It may not function properly under certain object or setting conditions. We shall not be responsible for any accident or losses incurred.

2-4 Other Settings Using the "VN-C655U Setup Tool" (7. Web)

A designated html file can be set as the default page for the web browser using this setting.

1. **Start up the "VN-C655U Setup Tool" and select [Web].**

Web Setting
HTTP Viewing
⊙ Enable   ○ Disable
HTTP Default Page
○ Available   ⊙ Unavailable
/user/ _____ .html
(Up to 20 characters)
HTTP Port
80 (Default : 80)
Cache Control
☐ No Cache
OK   Cancel   Apply

Specify settings for viewing using the web browser. When "Disable" is checked, viewing of images from other PCs will be disabled.

Set the use of a default HTTP page.
Specify the html file to be used as the default page when the [Available] box is checked.

Set the port number.

The proxy server may cache cgi on some rare occasions, and setting may not be successfully performed. In this case, check "No Cache".

Cautions

- It is possible to increase the security level by setting the HTTP server port number of this camera to a value other than the default value of 80 (value can be set between 1 to 65535. However, 21 and 554 cannot be used).

  Upon changing the HTTP port number, access from the web browser by entering http://192.168.0.2:12345 or http://192.168.0.2:12345/index.html (when the port number is changed to 12345). If you have lost track of the HTTP port number, check using the setup tool provided.

- Default page refers to the page displayed upon specifying the IP address such as http://192.168.0.2 at the web browser.

  Even when this feature is set to "Enabled", an error message indicating "404: Not Found" will be displayed when http://192.168.0.2 is entered if the html file specified here does not exist. Be sure to enter correctly.

- **Displaying still images uploaded to the /user folder**

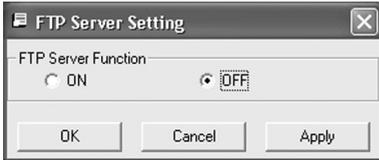 Still images in the /user folder can be displayed by creating a web page containing the following:

  <IMG SRC ="/user/xxxxx">

  (xxxxx refers to the file name of the still image)

2-4 Other Settings Using the "VN-C655U Setup Tool" (8. FTP Server)

HTML pages or gif and jpeg images can be uploaded to this camera by using the FTP Client software.

1. **Start up the "VN-C655U Setup Tool" and select [FTP Server].**

Set the FTP Server Function to "ON" or "OFF".

Notes

- The FTP user name is fixed as "Administrator". Use the administrator level password as the FTP password.
- About 256 KB is allocated as the FTP's user area.
- All uploaded files will be placed under the /user folder.
  Access from the web browser is possible by entering http://192.168.0.2/user/ aaa.html.(192.168.0.2 is the IP address for this camera when referring to aaa.html that is stored in the FTP.)
- Folders cannot be created on the FTP server of this camera. Only uploading, deletion and renaming of files are possible.

VN-C655 is equipped with a "FTP Client" feature that uploads still images to the existing FTP server on a regular interval. This feature enables simultaneous image monitoring by many clients (from many locations).

1. **Start up the "VN-C655U Setup Tool" and select [FTP Setting].**

The [FTP Setting] screen will be displayed.

❶ Continuous FTP
Check [Available] to enable the FTP feature.

❷ Trigger FTP

• Rec File
*.rec files containing local recording images will be uploaded automatically to the FTP server.

• Alarm FTP
For uploading still images (JPEG) to the FTP server when there is an alarm input.
For detailed settings, refer to the alarm FTP upload settings.
(☞ Page 48)

Notes

- Uploading starts automatically when a rec file is created.

- To delete a rec file, following the [Lower Memory Size] setting on the recording setting screen.

- When there is not enough free space in the built-in memory of VN-C655 to create a Rec file, the [Rec file] setting will not be executed. To enable the [Rec file] setting, it is recommended that the [Remove old files] setting under [Lower Memory Size] setting is set to [0].

- Uploading of still images will temporarily stop when uploading of Rec file starts.

FTP Setting screen:

❶ Continuous FTP
  ○ Available   ● Not Available

❷ Trigger FTP
  ○ Rec File   ○ Alarm FTP   ● Not Available

❸ Username
  anonymous
  (1-16 characters)

❹ Password
  (0-32 characters)

❺ FTP Server IP Address
  0 . 0 . 0 . 0

❻ FTP Port
  21 (Normally port 21)

❼ FTP Folder
  (0-64 characters)

❽ Upload Interval
  60 s (0-65535)   □ disconnect everytime

❾ Error recovery
  On connect error
    ● Retry forever
    ○ 10 min. Retry. (1-600)
  On transfer error
    □ Stop Uploading

❿ Filename
  ● vnetworks .jpg (1-32 characters)
  ○ Timestamp (ex.2002-01-23-01-23-45-678.jpg)

⓫ Alarm FTP upload settings
  Upload Interval   1 s
  Before trigger   5 s   After trigger   5 s

  OK   Cancel   Apply

2-4 Other Settings Using the "VN-C655U Setup Tool" (9. FTP Client Setting) (Continued)

❸ **Username**
Enter the user name to use for verification with the FTP server. It can be set as "anonymous".

❹ **Password**
Enter the password to use for verification with the FTP Server. Characters entered are displayed as " * ".

❺ **FTP Serverv IP Address**
Enter the IP address of the FTP server at the upload destination.

❻ **FTP Port**
Enter the FTP port number at the upload destination.
This is normally set to "21".

❼ **FTP Folder**
Enter the folder name on the FTP server at the upload destination.
Images will be uploaded to the default folder when this is left blank.

❽ **Upload Interval**
Specify the upload interval at which images are uploaded to the FTP server.
(Set value: 0 to 65535)
If "Disconnect every time" is selected, connection with the FTP server will be cut off upon uploading of each image.

❾ **Error recovery**
(Connection error)
Specify a recovery action when an error occurred with the TCP connection or FTP verification of VN-C655.
Retry forever : Recovery attempt is repeated until the power for VN-C655 is turned off.
* mins. Retry : Recovery attempt is repeated for a specified duration.
Set value (*) 1 to 600 mins

(Transfer error)
Specify a recovery action upon occurrence of a file transfer error while uploading the images.
Disable FTP : Disable the FTP function automatically.

Note

To resume operation, set ❶ [Continous FTP] to "Available".

❿ **Filename**
*.jpg : Check this item to upload file with the name that appears in the position indicated as " * ".

Note

Files are always overwritten with the latest ones and therefore only 1 image file will be stored in the FTP server.

Timestamp : Upload the time of the internal clock in VN-C655 as the file name.

Notes

- Ensure to set to the correct time on the Time Setting screen.
- All image files uploaded are stored in the FTP server.

⓫ **Alarm FTP Upload Setting**
Specify the method for uploading still images via the alarm FTP.
Upload Interval : Set the time interval for uploading JPEG images to the FTP server when there is an alarm input.
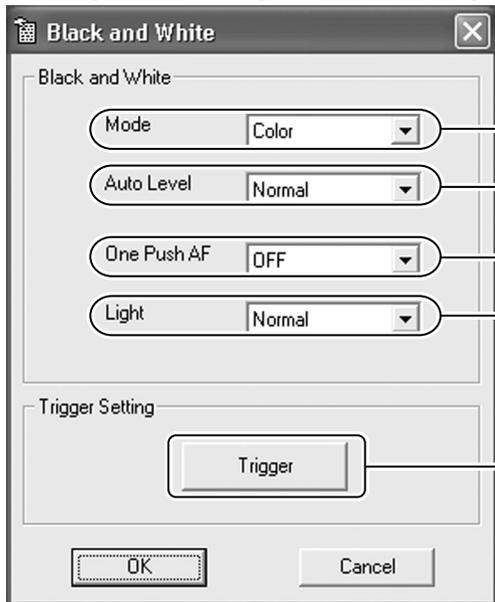Set value: 0 to 60 seconds
Before trigger : Set the time interval for uploading images before an alarm input.
Set value: 0 to 5 seconds before trigger
After trigger : Set the time interval for uploading images after an alarm input.
Set value: 0 to 60 seconds after trigger

2-4 Other Settings Using the "VN-C655U Setup Tool" (10. Black & White Setting)

1. **Start up the "VN-C655U Setup Tool" and select [B & W].**
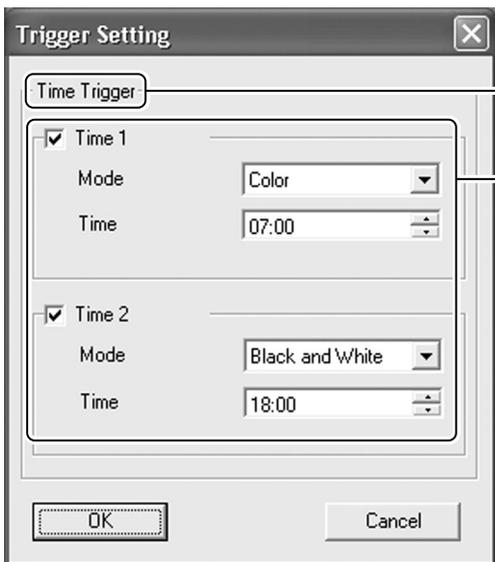
The [Black & White] screen will be displayed.

Black and White

Mode   Color   ❶

Auto Level   Normal   ❷

One Push AF   OFF   ❸

Light   Normal   ❹

Trigger Setting

Trigger

Click Trigger .

The [Trigger Setting] screen will be displayed.

OK   Cancel

Trigger Setting

Time Trigger

☑ Time 1

Mode   Color

Time   07:00

☑ Time 2

Mode   Black and White

Time   18:00

OK   Cancel

<Trigger Setting Screen>

Set the [Time Trigger] for switching the Black & White mode at the specified time.

Time1/Time2
Mode
  Black and White
             : Switches to the Black & White mode upon reaching the specified time.

  Color : Switches to the Color mode upon reaching the specified time.

  Auto : Switches automatically between the Black & White and Color modes according to the brightness upon reaching the specified time.

Time
Time at which the selected "Mode" will be activated.

2. When all the settings have been completed, click OK **to end.**

2-4 Other Settings Using the "VN-C655U Setup Tool" (10. Black & White Setting) (Continued)

❶ **Mode**
For setting the function on switching from Color to Black & White mode.

Black & White : Black & White mode at all times. :
Black & White mode at all times.

Color : Do not switch to the Black & White mode.

Auto : Switches automatically to the Color mode when brightness level of the object is high, and to the Black & White mode when brightness level of the object is low.

Note

To ensure switching between the Black & White / Color modes Switching between Black & White / Color may be performed according to the brightness of the object when the mode is set to Auto. However, this may sometimes fail due to the lighting condition or angle of view.

In order to ensure proper switching, it is recommended that switching be performed by inputting signals from an external sensor (sold separately) to the alarm terminal of this camera.

❷ **Auto Level**
For setting the signal level of the object that will be switched to the Black & White mode when the [Mode] item is set to "Auto".
Setting is disabled if [Mode] is set to any value other than "Auto".

Low : Switch to the Black & White mode when signal level of the object is low.

Normal: Switch to the Black & White mode when signal level of the object is normal.

High : Switch to the Black & White mode when signal level of the object is high.

❸ **One Push AF**
For setting whether to adjust focus automatically when switching between the Color / Black & White modes.

ON : Turn on auto focus function.
OFF : Turn off auto focus function.

Note

When in the Black & White mode, this camera is sensitive to both visible and near-IR light. As such, images may become out of focus upon switching from the Color to Black & White mode, depending on the type of light source used. When this occurs, adjust the focus again in the Black & White mode.

❹ **Light**
Set according to the type of lighting used for the object when in the Black & White mode.

Normal : Set to this when a normal light is used.
IR : Set to this when using an infrared emission light.

Note

Switching from the Color to Black & White mode may not function correctly if the "IR" setting is used under ordinary sunlight or fluorescent light.

This section describes how to set the standard time for VN-C655. NTP can also be used for this function.

1. Start up the "VN-C655U Setup Tool" and select [Time].

There are 2 methods of setting, depending on whether NTP is to be used.

When NTP is not used

① Set the date and time.

② Allows reference of PC time.

When NTP is used

① Enter the IP address of the NTP server to be used.

② Set the time zone.

③ Set the time interval for acquiring the current time from the NTP server.

Notes

- When using NTP, an NTP server will be required.
- When the time is changed during local recording, local recording time may not be correctly counted and recording for the specified number of seconds may not be obtained.
- Even upon selecting the NTP server and applying the settings, you will have to set the time again when the power is turned on if the NTP server cannot be used.
- The NTP server function is enabled by default upon standard installation of Windows XP Home Edition and Windows XP Professional.
- For Windows 2000, perform the following setting to enable the NTP server function.

  1. Set the following registry value to "1". (Default: "0")
  HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W32Time\Parameters\LocalNTP

  > Note that registry editing is a highly risky operation.
  > Editing operations shall be performed at your own risk. Please store backups of the registry as a safety measure. JVC shall not be held liable for any accident that arise from this operation.

  2. Restart the Windows Time Service (= Stop and start again).
  Open the [Properties] for Windows Time Service from [Services] under [Administrative Tools].

2-4 Other Settings Using the "VN-C655U Setup Tool" (12. Memory Information)

It is possible to check the memory capacity of VN-C655.

1. **Start up the "VN-C655U Setup Tool" and select [Memory Info].**

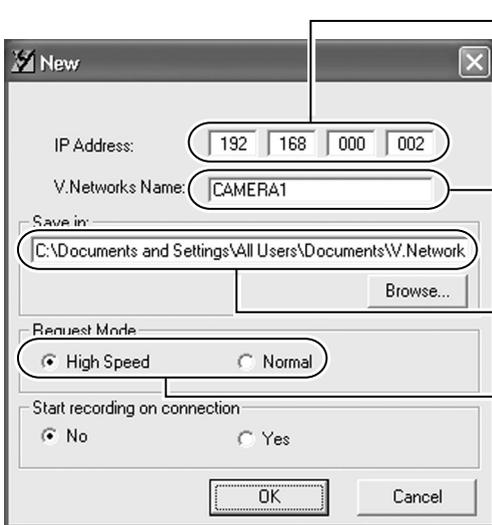| Memory Info		
Capacity	8112	k byte
Free Space	8112	k byte
	OK	

① Check the available memory space.
(The built-in memory capacity of this camera is about 8000 KB.)

2-5 Registering Connected Camera Using the "V.Networks Controller"

The connected camera can be registered with the installed "V.Networks Controller".

1. **Select [Start] → [Programs] → [V. NETWORKS] → [V.Networks Controller] to start up the "V.Networks Controller".**

2. **Select [File] and [New].**

3. **The [New] screen will be displayed.**

New	
IP Address:	192 168 000 002
V.Networks Name:	CAMERA1
Save in:	C:\Documents and Settings\All Users\Documents\V.Network
	Browse...
Request Mode	● High Speed ○ Normal
Start recording on connection	● No ○ Yes
	OK Cancel

① Enter the [IP Address].

Note

In a DHCP environment, enter the IP address that is assigned to this camera by the DHCP server.

② Enter the [V.Networks Name]. Do so by using a name convenient for subsequent selection, such as the installation location or number. (1 to 40 characters)

③ A folder with the name entered in ② will be created inside the folder specified here, and recorded files will be stored here.

④ Select the mode for acquiring images.

Normal :
Client will send requests for each image to VN-C655.
Set to Normal when using a narrow bandwidth network.

High Speed:
Images will be automatically sent from VN-C655 at the specified frame rate. A maximum transmission rate of 30 fps is possible for 640 x 480 images.
When sending out images to multiple clients at the same time, however, transmission at a rate of 30 fps for 640 x 480 images will not be possible.

Notes

- Images are divided into IP fragments when set to "High Speed".
- Images will be sent at the frame rate set at VN-C655. When setting the frame rate to "High Speed", do so upon ensuring that this does not impose excessive burden on the network. (☞ Page 65)
- Do not set to high speed for narrow bandwidth networks.
- Maximum data transmission capacity is 8 Mbps. A maximum rate of 30 fps may not be possible for 640 x 480 images depending on the image size.
- The MTU (Maximum Transmission Unit) sizes during image acquisition are as follows.

Transmission Mode	MTU Size (Bytes)
Normal	1430 Bytes
High Speed	1500 Bytes

4. Connect to VN-C655.

V.Networks Settings

Confirm the information here.

IP Address: 192.168.0.2

V.Networks Name: CAMERA1

V.Networks Type: VN-C655U

V.Networks ID:

Save in:

C:\Documents and Settings\All Users\Documents\V.Network

Request Mode
- ⦿ High Speed   ○ Normal

Start recording on connection
- ⦿ No   ○ Yes

[OK]   Cancel

Notes

To connect to a VN-C655 for which DHCP setting is possible, either one of the following environments will be required.
- Environment where no DHCP server exists.
- Environment with a DHCP server that clearly defines the IP and MAC addresses assigned to VN-C655.

Settings (Step 3 Setting Using the V.Networks Controller)

3-1 Starting Up V.Networks Controller

**The installed "V.Networks Controller" can be used to monitor camera images.
In addition, recording/playback operations and setting of frame rate for camera images are also possible.**

1. **Select [Start] → [Programs] → [V. NETWORKS] → [V.Networks Controller] to start up the "V.Networks Controller".**

① Select the camera to connect to from the pull-down menu for the camera.

② Live images from the camera wil be displayed.

Notes

- Enter the correct password if a password has been set.
- This controller can be connected to VN-C1, VN-C2, VN-C3, VN-C30 (JPEG only), VN-A1, VN-C10 (JPEG and MPEG) and VN-C625 as well VN-C655.

3-2 Features that Allow Setting Using the V.Networks Controller

The V.Networks Controller can be used to perform settings for image size and alarm.
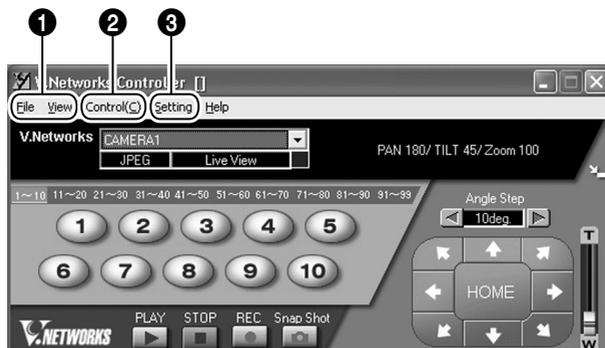
❶**File**

New : Creates a new file if the camera is connected for the first time.
Delete : Deletes a file.
Motion Detection Standby
: Select the camera for which the Motion Detection Standby function is to be enabled.
Exit : Exits the controller.

❷**View**

Image Size : Sets the image display size.
JPEG : 640 x 480
320 x 240

Upside Down: Displays the image inversely.

❸**Control (C)**

Auto Pan : Select this item and click to start the Auto Pan operation.
Auto Patrol (Mode1 to Mode 3)
: Select a mode for this item and click to start the Auto Patrol operation for the selected mode.
Auto Trace : Select this item and click to start the Auto Trace operation.
Auto Pan Stop
: Stops the Auto Pan operation.
Auto Patrol Stop
: Stops the Auto Patrol operation.
Auto Trace Stop
: Stops the Auto Trace operation.

Notes

● The following setting are disabled during Auto Pan:
• Auto Pan Setting
• Auto Patrol Setting
• Auto Trace Setting
• Preset Position Setting
• Pan Control

● The following setting are disabled during Auto Patrol:
• Auto Pan Setting
• Auto Patrol Setting
• Auto Trace Setting
• Preset Position Setting
• Pan/Tilt Control
• Zoom Control

● The following setting are disabled during Auto Trace:
• Auto Pan Setting
• Auto Patrol Setting
• Auto Trace Setting
• Preset Position Setting
• Pan/Tilt Control
• Zoom Control
• Focus Control

3-2 Features that Allow Setting Using the V.Networks Controller (Continued)

❹ ❺
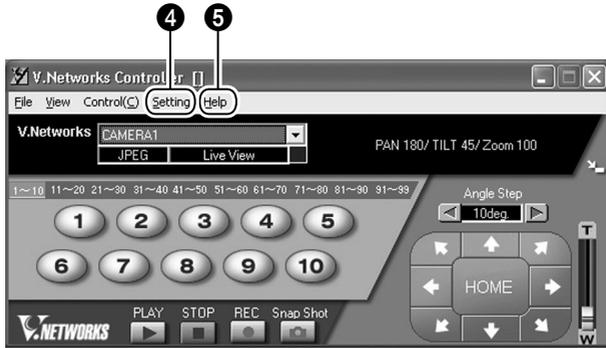
❹**Setting**

Quality	:	For setting the compression rate and image quality. (☞ Page 59)
Frame rate	:	For setting the number of camera images to send per second. (☞ Page 65)
Position Memory	:	For setting preset positions. (☞ Page 66)
Alarm Reg	:	Alarm operation will be enabled if this item is checked.
Alarm Setting	:	For setting alarm actions for each alarm. (☞ Page 67)
Pan/Tilt Setting	:	For setting the Pan/Tilt operation (speed, Auto Flip). (☞ Page 69)
Auto Pan Setting	:	For setting the Auto Pan operation. (☞ Page 70)
Auto Patrol Setting	:	For setting Auto Patrol operation. (☞ Page 72)
Auto Trace Setting	:	For setting the Auto Trace operation. (☞ Page 74)
Time Stamp	:	For setting the date and time display of a stored file.(☞ Page 76)
Property	:	For changing information of cameras that are not currently connected. (☞ Page 77)

❺**Help**

About	:	For checking the version of the V.Networks Controller.

3-3 Motion Detection Standby

The "Motion Detection Standby" function enables automatic connection upon receiving notifications on detected motion from VN-C655 when the V.Networks Controller has been started up.

1. **Select [File] and [Motion Detection Standby].**

2. **Select a camera.**
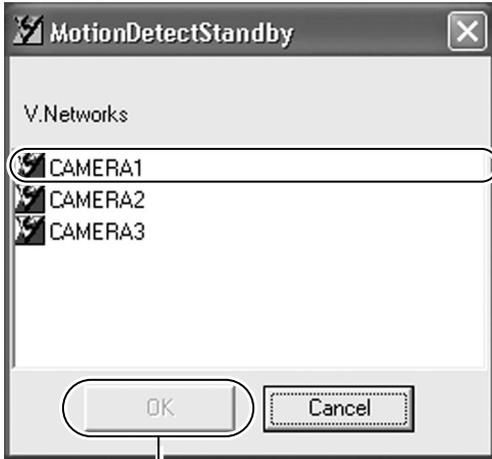
① Select the camera for which the Motion Detection Standby function is to be enabled.

① Click **OK**.

3. **Click OK.**

3-4 Image Size and Inversion

The "V.Networks Controller" can be used to set the size of the motion image window as well as to invert an image.

1. Select [View].

2. Specify [Image Size] and [Upside Down] settings.
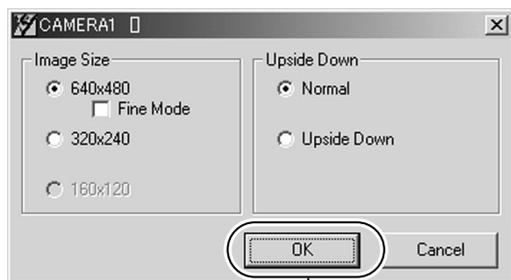
Notes

- Setting to the Fine mode enables display of image details.
  Images of moving objects shot in this mode may be blurred, but this is not a malfunction.
- Fine mode can only be used with the 640 x 480 resolution.

Click [OK].
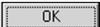
Notes
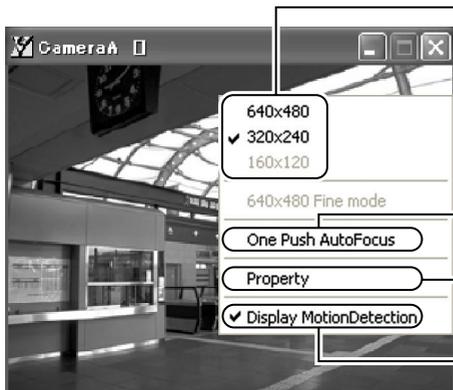
Right-click on the motion image window to change the settings.
Set the image size.

- VN-C655 does not support the 160 x 120 setting.

Click to adjust focus automatically.

Displays the MAC address, IP address, model and firmware version.

When ✔ is checked, a grid for the motion detection area will appear and the detection area will be displayed in red.

3-5 Image Quality Setting

The "V.Networks Controller" can be used to perform image quality settings such as compression level and white balance.

1. **Select [Setting] and [Quality].**

2. **Change the set values. (For description of each function, ☞ next page)**

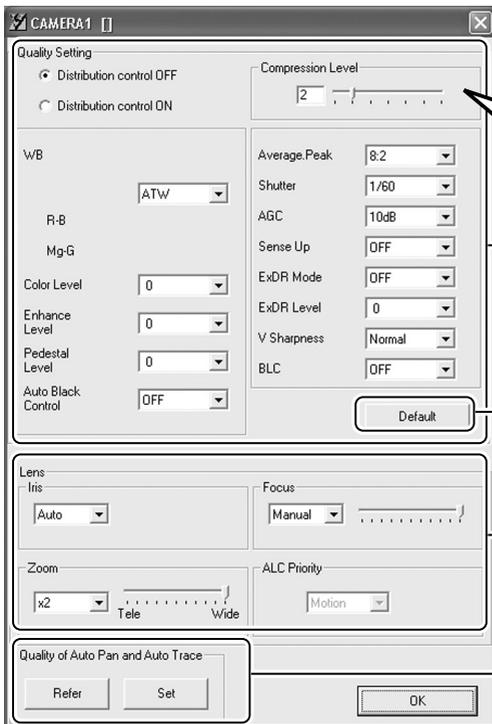* When the [Distribution control ON] is selected, the following screen will be displayed.

Image Quality Setting (☞ Page 60)

Resets all set values on image quality to their factory settings.

Lens Setting (☞ Page 64)

For setting the image quality during Auto Pan and Auto Trace.

Click `Refer` to display a confirmation screen containing the current set values. Perform setting using "Image Quality" on this screen. When setting is complete, click `OK`.
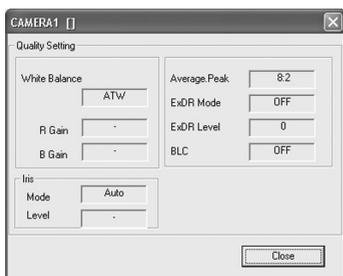
<Auto Pan/Auto Trace Image Quality Setting>

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3-5 Image Quality Setting (Continued)

■ **Image Quality Setting**

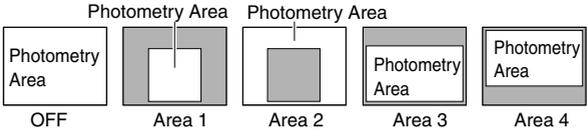| Item		Function/Set Value	Initial Value
Distribution Control		Set the maximum transmission control.	OFF
	OFF	Setting of compression level is possible when this is set to "OFF", and images will be sent out at the specified compression level. The smaller the value, the lower the compression level and hence a higher image quality. However, data volume will also increase. **Set Value**: 1 to 7	2
	ON	Setting of bit rate is possible when this is set to "ON", and the compression level of images will be automatically adjusted according to the specified bit rate before they are sent out. **Set value**: 32 kbps to 8 Mbps **Note** • It will be necessary to establish connection again upon setting to enable display at the correct frame rate.	—
WB		Determines the setting of the white balance adjustment feature. White balance can be adjusted for lighting conditions within a color temperature range of 2,300 K to 10,000 K. **ATW** : Auto-Tracking White Balance mode. Adjusts the white balance automatically according to the color temperature of the lighting. During ATW setting, hue adjustment for the R-gain and B-gain items will be disabled. **AWC** : If AWC is selected from the pull-down menu, the Auto White Control mode will be activated for white balance adjustment. Switching from the ATW to AWC mode will take at least 15 seconds.	ATW
R-B		Adjusts the phases of R (Red) and B (Blue) under AWC mode. **To enhance blue** : Decrease the value. **To enhance red** : Increase the value. **Setting values** : 0 to 100	56
Mg-G		Adjusts the phases of M (Magenta) and G (Green) under AWC mode. **To enhance green** : Decrease the value. **To enhance magenta** : Increase the value. **Setting values** : 0 to 100	30
Color Level		Adjusts the color level of video signals. To lighten the color → Decrease the value To darken the color → Increase the value **Set value**: -5 to 5	0
Enhance Level		Sets the contour enhancement which controls the sharpness of video signals. To soften the picture → Decrease the value To sharpen the picture → Increase the value **Set value**: -5 to 5	0
Pedestal Level		Sets the pedestal level (black level) of video signals. To darken the picture → Decrease the value To brighten the picture → Increase the value **Set value**: -5 to 5	0

Item	Function/Set Value	Initial Value
Auto Black Control	Use this function when darker parts of a picture are unclear even after the gain has been increased using the AGC (Auto Gain Control). **ON** : When the black level of the video signal is low, the pedestal level is increased automatically in order to improve the clarity of the darker parts. **OFF** : Turns this function off.	OFF
Average : Peak	Sets the method of exposure detection according to ratio between the average and peak values. • **Large Average value** : Use this setting when areas other than those highlighted are dark and unclear. (Example: 10:0) • **Large Peak value** : Use this setting when halation occurs at the highlighted areas. Use this setting when areas other than those highlighted are dark and unclear. (Example: 5:5) **Set value** : 10:0, 9:1, 8:2, 7:3, 6:4, 5:5	8:2
Shutter	Sets the speed of the electronic shutter. **Set value** : 1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 **Notes** • To reduce flickering that occurs under fluorescent lighting, set the shutter speed to 1/100 if your local power supply frequency is 50 Hz, and to 1/60 if it is 60 Hz. • The higher the shutter speed, the more prominent will be the smear phenomenon. This is a phenomenon that is characteristic of CCDs, whereby white stripes appear at the top and bottom of a bright light source.	1/60
AGC	Sets the maximum gain of the AGC (Auto Gain Control), which electronically increases the gain when the object is under low light conditions. **OFF** : Disable AGC. **10 dB** : Increase gain by a maximum of 10 dB according to the brightness of the object. **20 dB** : Increase gain by a maximum of 20 dB according to the brightness of the object. **Note** • The screen may appear grainy at dark places when the gain level is increased.	10 dB

3-5 Image Quality Setting (Continued)

■ **Image Quality Setting (Continued)**

Item	Function/Set Value	Initial Value
Sense Up	This function is used to increase the sensitivity by extending the exposure time. Increasing this value slows the shutter speed and motion may appear unnatural. When the item "SHUTTER" is set to "1/250" or more, the SENSE UP item does not work. Setting values: OFF, x2, x4, x8, x16, x24, x32 • When SENSE UP is activated, the picture may become rough and whitish, and subject to white blemishes. • When the setting of the "SENSE UP" function is not OFF, flicker may appear on the screen under fluorescent light or mercury lamps. This is due to the principles of the SENSE UP, and is not a malfunction. • There may be cases where flicker can not be reduced even under the following conditions: 1) Shutter speed is set at 1/100 in areas where the commercial electric current frequency is 60 Hz. 2) The shutter speed is set at 1/60 in areas where the commercial electric current frequency is 50 Hz.	OFF
ExDR Mode	The ExDR function synthesizes pictures captured at a shutter speed of 1/100 and those captured at higher shutter speeds to help monitor objects having large differences in brightness levels. When the "SHUTTER" function is set to "1/250" or a higher, this function does not work. **OFF** : Turns the ExDR function off. **ON** : Turns the ExDR function on. • When the ExDR function is on, flicker may appear on the screen under fluorescent light or mercury lamps. This is due to the principles of the ExDR, and is not a malfunction. • There may be cases where flicker cannot be reduced even under the following conditions: 1) Shutter speed is set at 1/100 in areas where the commercial electric current frequency is 60 Hz. 2) The shutter speed is set at 1/60 in areas where the commercial electric current frequency is 50 Hz.	OFF
ExDR Level	This function sets which section of the object is to be displayed in the easiest-to-view brightness level in the ExDR mode.	0

Item	Function/Set Value	Initial Value
ExDR Level (Continued)	To make a low-light section of the object easy to view: Increase the level. To make a highlighted section of the object easy to view: Decrease the level. **Setting values** : -5 to 5 • When the difference in brightness between objects is large, the picture may not change even when the ExDR LEVEL is varied. This is due to the characteristics of the camera and is not a malfunction. • When the item "SHUTTER" is set to 1/250 or higher,the settings to the item "ExDR LEVEL" cannot be carried out. • When the item "ExDR MODE" is set to OFF, the settings for the item "ExDR LEVEL" cannot be carried out.	0
V.Sharpness	This function sets sharpness in the vertical direction of the image. **NORMAL** : Normal sharpness. **HIGH** : High sharpness. The following phenomena may be observed when HIGH is selected. This is not a malfunction. * Horizontal stripes are observed on bright objects. * Vague horizontal stripes are observed under low light conditions.	NORMAL
BLC	Sets of area of back light compensation. Use this function when the object appears dark (under auto iris control) because of the presence of a bright light source behind it. This function make it possible to place the unnecessary light source outside the photometry area. **OFF** : The backlight compensation function does not work. **ARER 1 to AREA 4** : Select one of the four types. Photometry Area Photometry Area Photometry Area / Photometry Area / Photometry Area / Photometry Area / Photometry Area OFF Area 1 Area 2 Area 3 Area 4 When the item "ExDR MODE" is set to ON, the item "BLC" is set to OFF. Under this condition, the settings to the item "BLC" cannot be varied.	OFF

3-5 Image Quality Setting (Continued)

■ Lens

| Item	Function/Set Value	Initial Value
Iris	Adjust the brightness of lens. A smaller value makes images darker, closing the iris. **Auto** : Adjusts iris automatically. **Auto +** : Adjusts iris automatically to a level brighter than the default state. **Auto –** : Adjusts iris automatically to a level darker than the default state. **Manual** : Adjusts iris manually.	Auto
Focus	Adjust focus. Move the slider to the left to focus far object while moving the slider to the right to focus near object. **Easy AF** : Focus will be adjusted automatically when Pan/Tilt and Zoom are operated on the camera. **Manual** : Adjusts the focus manually.	Easy AF
Zoom	Perform Zoom operation. The object enlarges when zoomed towards the Wide end, and reduces when zoomed towards the Tele end. When the zoom lens is set toward TELE, optical zooming is activated first and electronic zooming second. This function sets the maximum zoom ratio of the electronic zooming. Setting values : x1, x2, x4, x6, x8, x10. **Note** ● Note Picture quality deteriorates under electronic zooming as it is accompanied by digital image processing. ● An increase in the electronic zooming ratio may deviate the center of the image slightly toward the top left. This is due to the camera properties and is not a malfunction. ● Continuous operation from optical zooming to electronic zooming is not available. When optical zooming reaches the TELE end, press the TELE button again. ● During digital zoom, the PAN/TILT Position Indicator (☞Page 73) lights up in yellow color.	
ALC Priority	When an object is dark, this functions sets whether priority during monitoring is placed on maintaining the motion of the camera or on picture quality. **Motion** : Motion of the camera is given priority. When an object is dark, the AGC function is prioritized. This setting is suitable when objects are characterized by quick motion. **Picture** : Picture quality is given priority. When an object is dark, the SENSE Up function is prioritized. This setting is suitable when picture quality is important. When the "AGC " and "SENSE UP" functions are both set to "OFF", this function does not work .	Motion

3-6 Frame Rate

The "V.Networks Controller" can be used to set a maximum value for the frame rate, which indicates the number of live image updates per second.

1. Select [Setting] and [Frame rate].
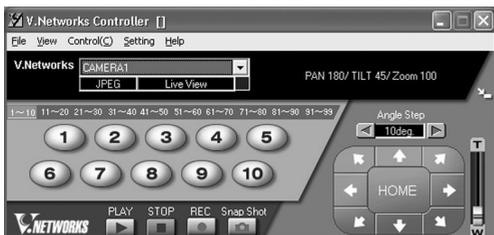
2. Set the [Frame Rate].
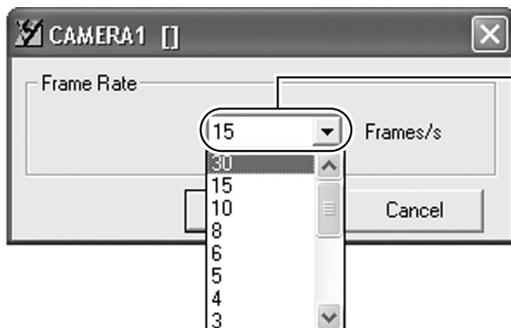
Set the maximum number of images per second that are sent from VN-C655.

(Factory Setting: 15)

Set value : 30, 15, 10, 8, 6, 5, 4, 3, 2, 1,1/
            2,1/3, 1/5, 1/10, 1/15, 1/20, 1/30

Notes

The actual number of frames received and displayed per second is dependent on factors such as PC performance, compression level of images and the LAN environment.

In the case of a LAN environment where multiple operations are being performed at one time (particularly when the network traffic is heavy), reduce the number of frames to be transmitted.

Cautions

Frame rate for local recording cannot be set using this function. To set the frame rate for local recording, make use of the "VN-C655U Setup Tool" (☞ Page 40).

3-7 Preset Position Setting

The "V.Networks Controller" can be used to set the preset position for the connected camera.

1. Select a camera.

① Select a camera for setting from the pull-down menu for the camera.

2. Select [Setting] and [Position Memory].
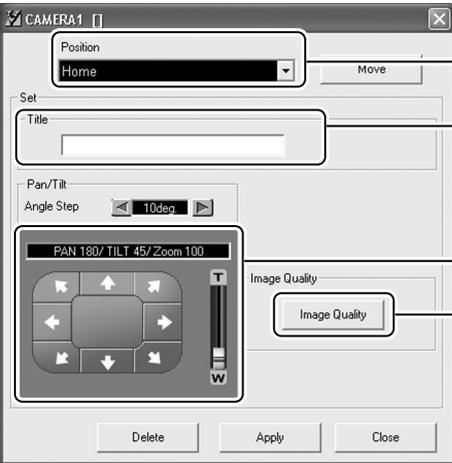
① Select a position.

② The title of the current position will be displayed.
Enter here to change the title. (Up to 32 single-byte characters (32 bytes))

③ Adjust the angle of view and zoom.

④ Adjust the image quality.
Click ▐ Image Quality ▐ to display the Image Quality Setting screen.
(For details on set values, ☞ Page 62 to Page 64)

<Image Quality Setting Screen>
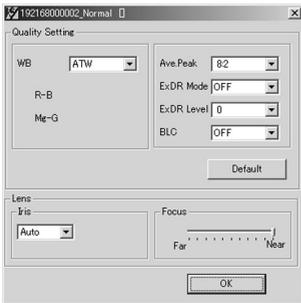
3. When setting is complete, click ▐ Apply ▐ followed by ▐ Close ▐.

3-8 Alarm Setting

The "V.Networks Controller" can be used to set the action to be taken when an alarm signal is received.

1. **Select [Setting] and [Alarm Setting].**

2. **Change the set values. (For description of each function, ☞ next page)**
Setting may be performed for the [Motion Detection], [Alarm 1], [Alarm 2], [Relay Alarm], [Preset Position] and [Black & White].
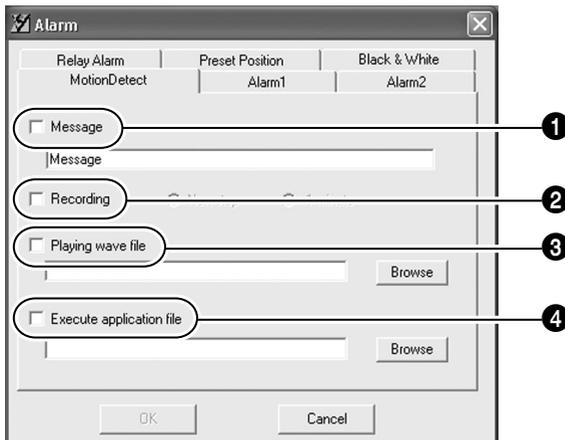
(Setting of ❶ and ❷ are disabled when in the Relay Alarm mode.)

3. **When setting is complete, click** OK .

3-8 Alarm Setting (Continued)

❶ **Message**

Message entered in the textbox will be displayed when there is an alarm input.
(Up to 100 single-byte characters)

❷ **Recording**

Starts recording when there is an alarm input.
Non-stop : Recording continues until the Stop button is pressed.
1 minute : Recording stops after 1 minute.

Notes

- The [1 minute] mode is used for conserving hard disk space.
- In this mode, recording stops after 1 minute even if recording has already started before the alarm input.

❸ **Playing wave file**

Plays back a designated Wave file when there is an alarm input. Click the [Browse] button to specify a file.

Note

Alarm actions may be delayed due to PC performance if a large Wave file (.wav) is selected.

❹ **Execute application file**

Executes a designated program when there is an alarm input. Click the [Browse] button to specify a program.

Notes

Alarm Operation

The following settings are required for the operation of the set alarm.

1. [Alarm Reg] is checked. This item is located under the [Setting] menu of the "V. Networks Controller". (☞ Page 56)
2. All alarm settings in the [Alarm Setting] of the "VN-C655U Setup Tool" are enabled. (☞ Page 34)

Relay Alarm

When the Relay Alarm function is enabled, subsequent alarms will not be activated.

3-9 Pan/Tilt Setting

The "V.Networks Controller" can be used to perform pan/tilt settings.

1. **Select [Setting] and [Pan/Tilt Setting].**

2. **Perform Pan/Tilt settings.**
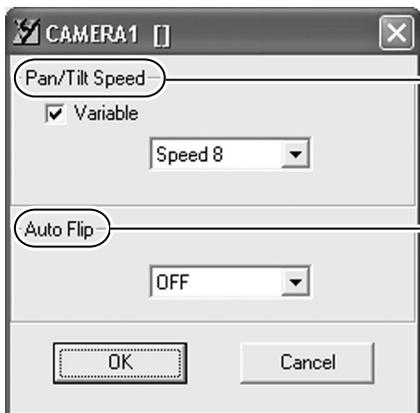
Pan/Tilt Speed
Sets the speed of movement when Angle Step is set to "0".

Variable:
Alters the pan/tilt speed automatically according to the zoom of the lens.
The speed lowers when the zoom position is set to the Tele-end, and increases when set to the Wide-end.

Speed 1 to Speed 8:
Sets the Pan/Tilt speed. The larger the value, the higher will be the pan/tilt speed.

Auto Flip
Inverts images on the screen according to the camera angle. Set this function when shooting an object that passes beneath the camera.

OFF : Auto Flip is disabled.

ON : The image rotates 180˚ horizontally and stops when the object comes directly beneath the camera.

3. **Click** ⌊ OK ⌋ **.**

3-10 Auto Pan Setting

The "V.Networks Controller" can be used to set the Auto Pan operation, which moves the camera from a preset position horizontally at a constant speed.
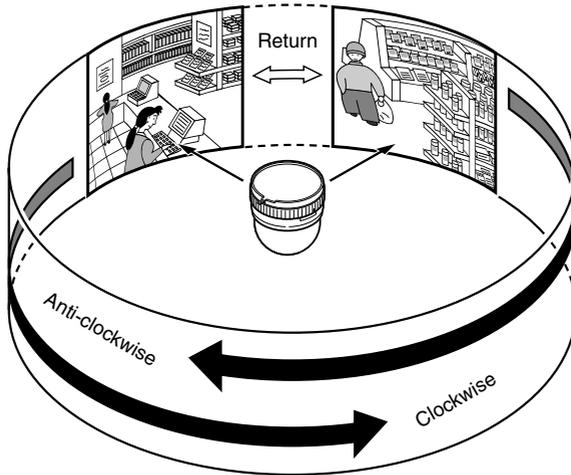
1. **Select a camera.**

① Select the camera for setting from the pull-down menu for the camera.

2. **Select [Setting] and [Auto Pan Setting].**
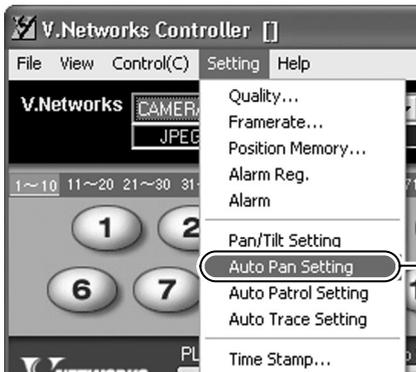
① Select [Auto Pan Setting] from the [Setting] pull-down menu.

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3. Perform setting.

<Position Setting Controller>

① Set Auto Pan operation using the [Action Mode] pull-down menu.
- **Right** : Rotates horizontally in the clockwise direction from the start position.
- **Left** : Rotates horizontally in the anti-clockwise direction from the start position.
- **Return** : Moves continuously between the start and return positions horizontally.

② Set the speed of operation from the [Speed] pull-down menu.
(Set value: High, Normal, Low)

③ Set the start position of the operation. Set the start position using the position setting control panel, followed by clicking Setting .
If Pan/Tilt is operated after setting the start position, click Move to move the camera to its start position.

④ Set the return position of the operation. (This can be specified only when [Mode] is set to "Return".)
Set the return position using the position setting control panel, followed by clicking Setting .
If Pan/Tilt is operated after setting the return position, click Move to move the camera to its start position.

Note

For starting and stopping operations of Auto Pan, Auto Patrol and Auto Trace, please refer to Page 55.

4. Close the window.
When setting is complete, click OK to close the window.

3-11 Auto Patrol Setting

The camera can be moved to multiple positions based on the preset sequence and time. Use this setting to view specified positions in sequence. Perform setting for each camera.
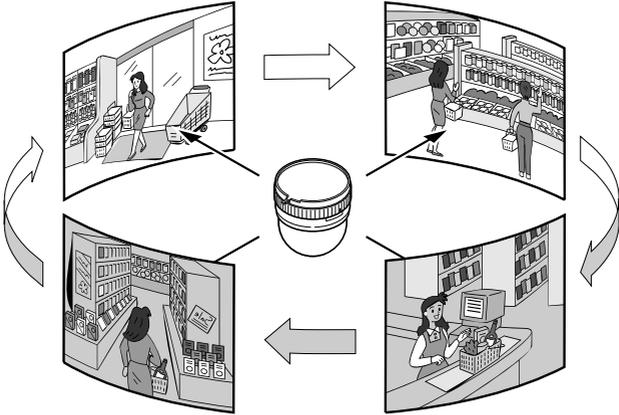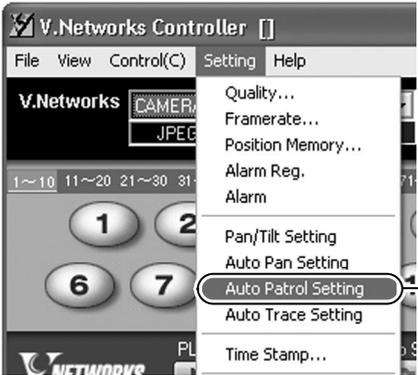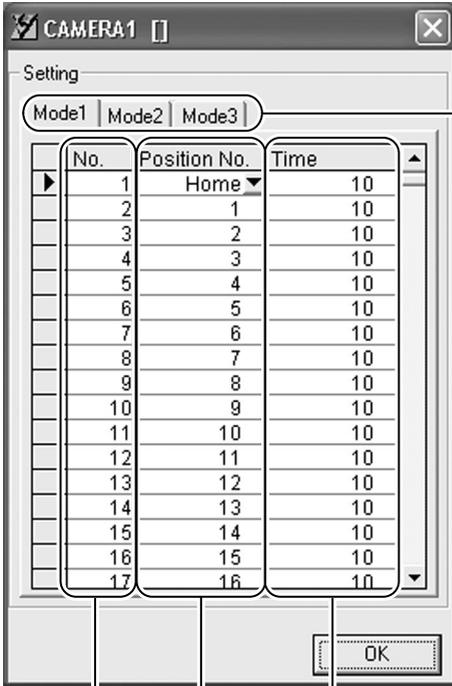

1. Select a camera.

① Select a camera for setting from the pull-down menu for the camera.

2. Select [Setting] and [Auto Patrol Setting].

① Select [Auto Patrol Setting] from the [Setting] pull-down menu.

3. **Perform setting.**

① Set the mode. Setting can be performed from Modes 1 to 3.
Click the tab of the respective mode for setting.

② Set the Position Number.
For each Patrol Number, set a Position Number to move to in sequence.

③ Set the time interval.
Set the time for displaying each position set in ②.
(Unit: seconds)

Auto Patrol No.
Auto Patrol operates in the sequence of these numbers.

4. **Close the window.**
When setting is complete, click 〔 OK 〕 to close the window.

Note

For starting and stopping operations of Auto Pan, Auto Patrol and Auto Trace, please refer to Page 55.

3-12 Auto Trace Setting

Details of manual camera operations can be stored and reproduced.

1. Select a camera.

① Select a camera for setting from the pull-down menu for the camera.

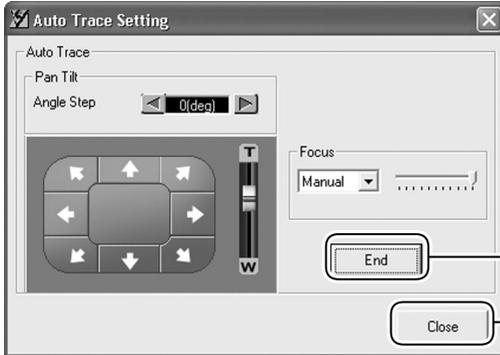### *2.* Select [Setting] and [Auto Trace Setting].
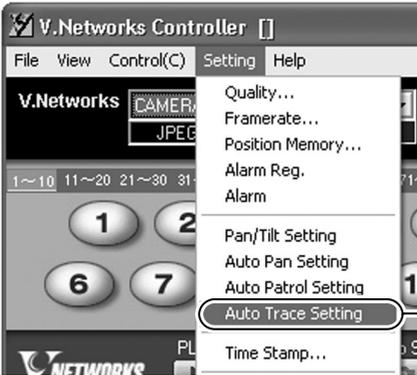
① Select [Auto Trace Setting] from the [Setting] pull-down menu.

3. Start to memorize operation.
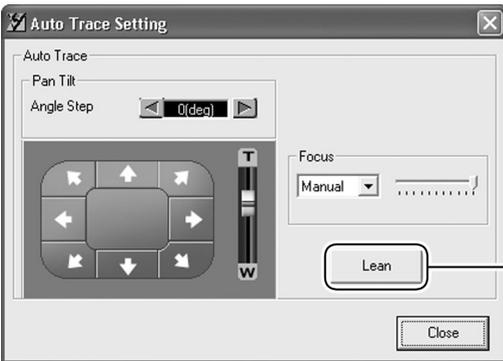
① Click Lean .
Memorization of Auto Trace will start and subsequent pan/tilt as well as zoom operations will be stored. (Approximately 30 seconds)

4. Close the window.

① When memorization is complete, click [End] to end.

② When setting is complete, click [Close] to close the window.

Caution

- There is a limit to the length of recording time.
  Recording can be performed up to 30 seconds. However, this may shorten depending on its frequency of use. Be sure to perform operation check upon setting.
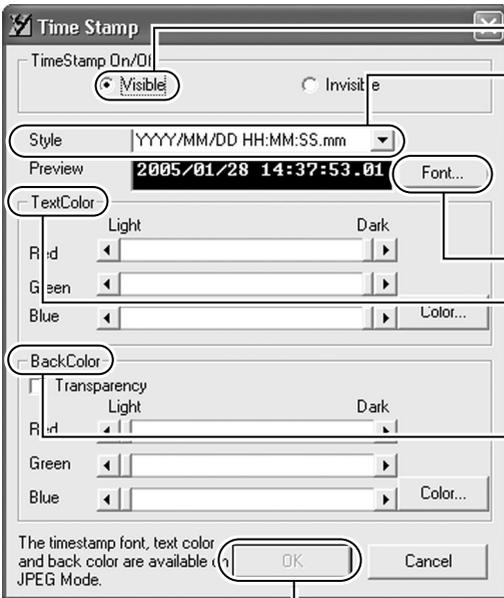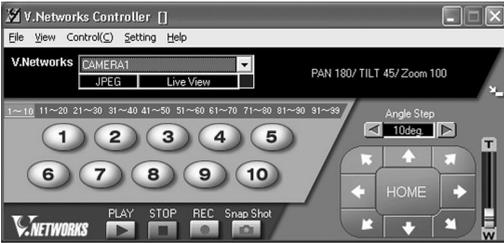
Note

For starting and stopping operations of Auto Pan, Auto Patrol and Auto Trace, please refer to

3-13 Time Stamp

The "V.Networks Controller" can be used to set the time stamp that displays date/ time on camera images. The displayed time/date will be recorded.

1. **Select [Setting] and [Time Stamp].**

① Select [Visible].

② Select the display style in [Style].
Year, month and day are represented as "YYYY", "MM" and "DD" respectively.
Hour, minute and second are represented as "HH", "MM" and "SS".
Millisecond is represented as "mm".

③ Select the display [Font].

④ Set the [Text Color].

⑤ Set the background color.
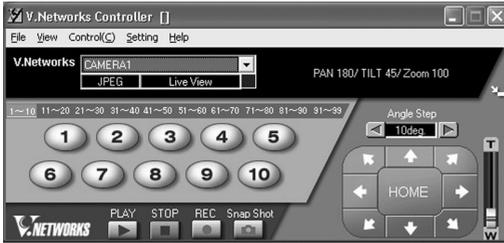
⑥ Click ⎡ OK ⎤.

Note

● Left-click on the motion image or playback window while holding down the [Shift] key at the same time. The time stamp will appear where the mouse was clicked.
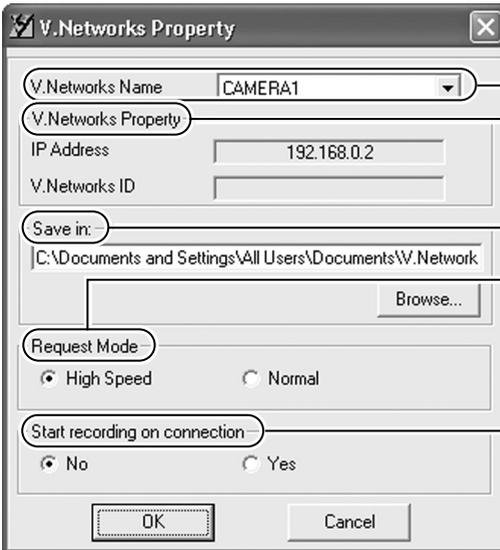
3-14 Changing Registered Information

The "V.networks Controller" can be used to change information such as the preset connection method for a camera.

1. **Select [Setting] and [Property].**

2. **Perform setting.**

① Change the camera.

Cannot be changed.

② Recorded files will be stored in the folder specified here.

③ Select the mode for image acquisition. *For details, refer to Page 52.

④ Set whether to [ON].

3. **When alteration is complete, click** OK **.**

Caution

Information cannot be changed for a camera that is currently connected.

Operations (Step 4 Operation Using the V.Networks Controller)

4-1 Features that Allow Operation Using the V.Networks Controller

The "V.Networks Controller" can be used to select a camera as well as record/play back camera images.

(The controller screen is identical to other V.Networks versions, and there are functions that cannot be operated from VN-C655)
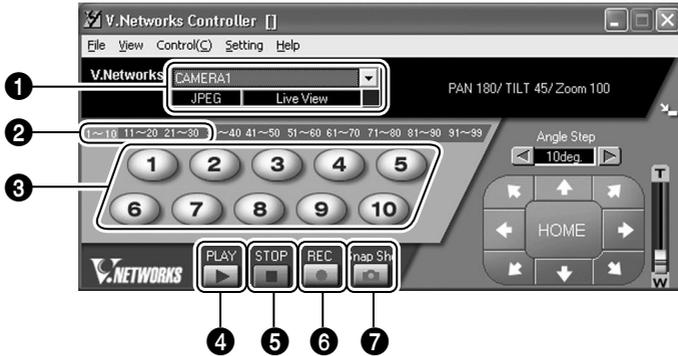
❶ CAMERA

Displays the name of the connected camera. You can also select the connected camera using ▼ (pull-down menu).

❷ Position tabs [1-10], [11-20], [21-30], [31-40], [41-50], [51-60], [61-70], [71-80], [81-90], and [91-99]

For assigning the buttons for position moving (see ❸).

❸ Buttons for position moving

For selecting a position. Assign buttons using the position tabs in ❷.

❹ PLAY

For selecting and playing back video files saved in ❻. Use also this button to make a selection when playing back files recorded during an alarm.
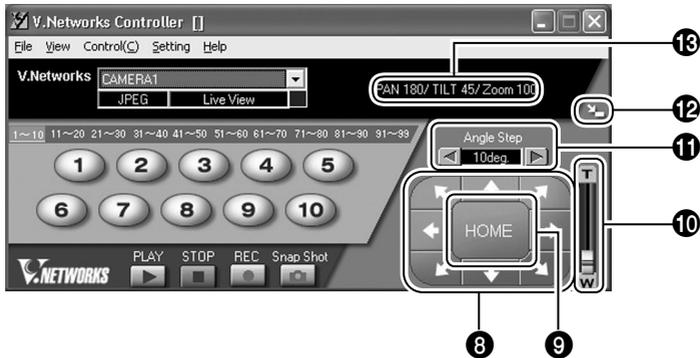
❺ STOP

Stops recording.

❻ REC

Starts recording when this is selected. Recorded files are saved under the name as shown in ❶. During recording, a [Recording] and [REC] indicator will appear in ❶ and on the displayed image respectively.

❼ Snap Shot

For registering and saving only 1 frame of the displayed image.

⓼ Pan/Tilt button

For adjusting the Pan/Tilt position.
Use Angle Step to set the operating angle for every single operation of the Pan/Tilt button. Set the Pan/Tilt operating speed using the [Pan/Tilt Setting] item under [Setting]. (☞ Page 69)

⓽ HOME

For moving the camera to the home position.

⓾ Zoom button and Zoom bar

For adjusting the zoom position.

⓫ Angle Step

Sets the degree of angle to move per click when operating using the Pan/Tilt button in ⓼. Pan/Tilt will operate continuously when this is set to 0 degrees.

⓬ Size

For reducing the display size of the [V.Networks Controller] screen. (See diagram below)
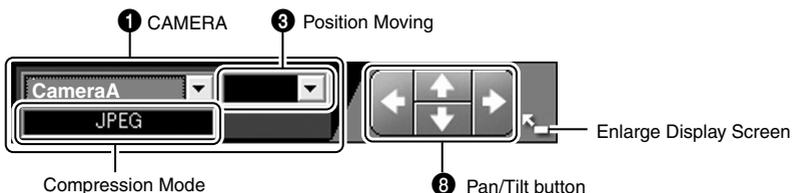
⓭ Pan/Tilt/Zoom Position Indicator

Displays the current Pan/Tilt and Zoom positions.

Note

For starting and stopping operations of Auto Pan, Auto Patrol and Auto Trace, please refer to Page 55.

Reduced Screen

❶ CAMERA   ❸ Position Moving

Compression Mode

❽ Pan/Tilt button

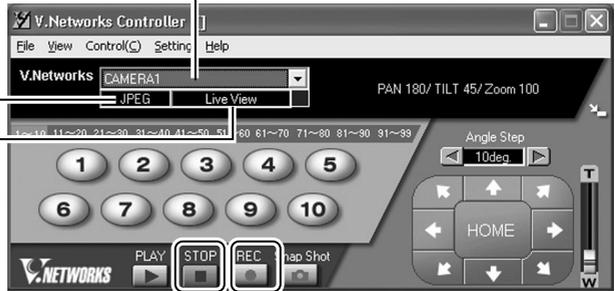Enlarge Display Screen

---

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4-2 Record/Stop

The "V.Networks Controller" can be used to save camera images to a file.

1. Click the [REC] button.

Connected Camera
(Saved in a folder under this name)

Recording Format

[REC] Indicator

2. *1.*

(Motion Image Window)

[REC] Indicator

2. Click the [Stop] button.

Stops recording and the [Recording] and [REC] indicators will disappear.
(Click the [Snap Shot] button to record only 1 frame of the displayed image.
(☞ Page 84)

Notes

- Avoid recording continuously for an extended period of time. Attempt to play back files recorded over an extended time may cause playback failure on some PCs due to insufficient memory.
- Do not change the name of the record file. Doing so may cause playback to fail.

4-3 Playback

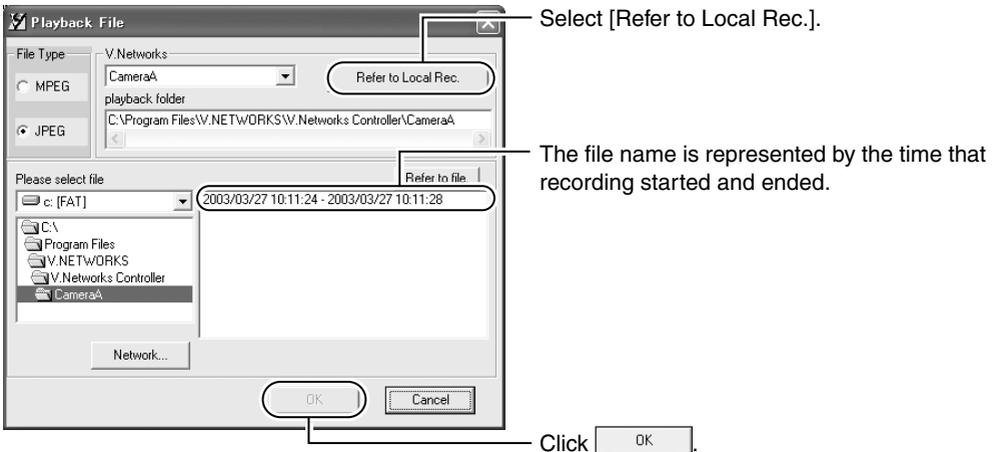**Files saved upon "REC" using the "V.Networks Controller" can be selected and played back.**

(Playback of a file and display of motion images cannot be performed at the same time.)

1. **Click the [PLAY] button.**

[PLAY] button

2. **Select the file to play back on the [Playback File] screen, followed by clicking** ⬚ OK ⬚ **.**
   To play back local recording files, click [Refer to Local Rec.] to select a file.

Select [Refer to Local Rec.].

The file name is represented by the time that recording started and ended.

Click ⬚ OK ⬚.

4-3 Playback (Continued)

3. Click [OK].

V.Networks Controller

? Are you sure to close the connection?

OK   Cancel

4. The [Playback] screen is displayed.

Playback (JPEG)

2005/01/28 03:57:31.23

Slidebar
• Moves towards the right as playback time progresses.
• It can be dragged using the mouse.

2005/01/28 - 03:57:31:23   1/30
2005/01/28 11:58:00 - 2005/01/28 11:58:02

[Stop] button
[Pause] button
[Play] button

4-4 Cautions on Record/Play Functions

Record/Playback Time
- Do not record or play back a file that exceeds 2 GB using the "V.Networks Controller". Random access to data beyond 2 GB is not possible with standard Windows applications.

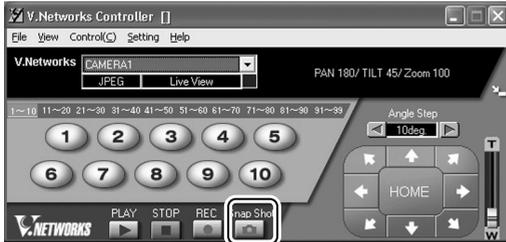Reference: Approximate recording time for 2 GB data
(At frame rate of 5 fps)

Image Size	Data Size Per Image	Approximate Recording Time
320 x 240	Approx. 15 KB	6 hours
640 x 480	Approx. 50 KB	2 hours

4-5 Snapshot

The "V.Networks Controller" can be used to save video images currently displayed or playback images as still image files.
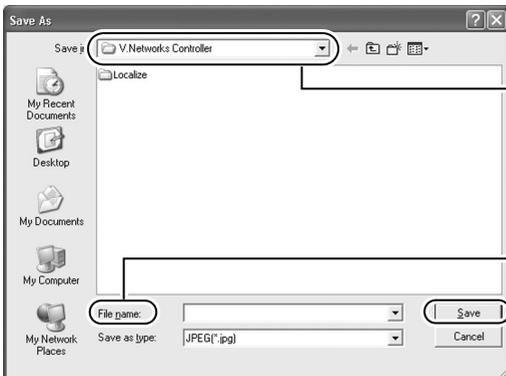
1. **Click the [Snap Shot] button.**

Note

Only JPEG files can be saved as snapshot files.

[Snap Shot] button

2. **The [Snap] screen will be displayed.**

① Select [File] and [Save].

3. **The [Save As] screen is displayed.**

① Specify a folder for saving the file.

② Enter a File name.

③ Click ⌞Save⌟ to save the snapshot.

Note

Other Viewer Software
● Still image files that are saved using VN-C655 can also be displayed on other conventional viewer software. However, inverted images will not be reversed. In addition, the color reproduced may also differ.

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Operations (Step 5 Operating Using a Web Browser)

In addition to the controller software supplied, web browsers can also be used to view still/motion images as well as to perform various settings.

5-1 Operating Environment

The following environment will be required to view/operate VN-C655 using a web browser.

The PC in use shall also meet requirements on the operation environment stated in this manual (☞ Page 9).

PCs installed with the following web browsers
- Internet Explorer 4.x, 5.x or 6.x.
- For CPU performance, required memory space and other values, please refer to the recommended values by the respective web browser in use.
  In order to enable smooth display of motion images on a large screen, it will be necessary to ensure adequate allowance as compared with the recommended values by web browsers. In addition, images of the installed camera cannot be properly displayed using 256 color modes.

> **Caution**
>
> Operation using the web browser requires an environment that enables proper running of Java. Please refer to our web site for details.
>
> http://www.jvc-victor.co.jp/english/pro/vnetworks/index-e.html

LAN Environment
- VN-C655 functions as a web server that makes use of a HTTP protocol.
  Access linking by host name will be possible as long as the environment allows use of a DNS (Domain Name System).
- It is possible to establish a 1-to-1 connection between the PC and VN-C655 using a cross cable. (Although rare, the use of cross cables may not be possible with some LAN boards. Be sure to check before using.)

> **Notes**
>
> **Web Page Images**
>
> Web page screens in this manual are web page data inside VN-C655 (including images shot using the installed camera) which are displayed using the web page browsing/display function of the browser.
>
> As such, the format of web pages and fonts displayed may vary according to the type of browser and settings.
>
> In the event that items on the screen are not fully displayed, hence causing problems during use, display all items such as by resizing the window.
>
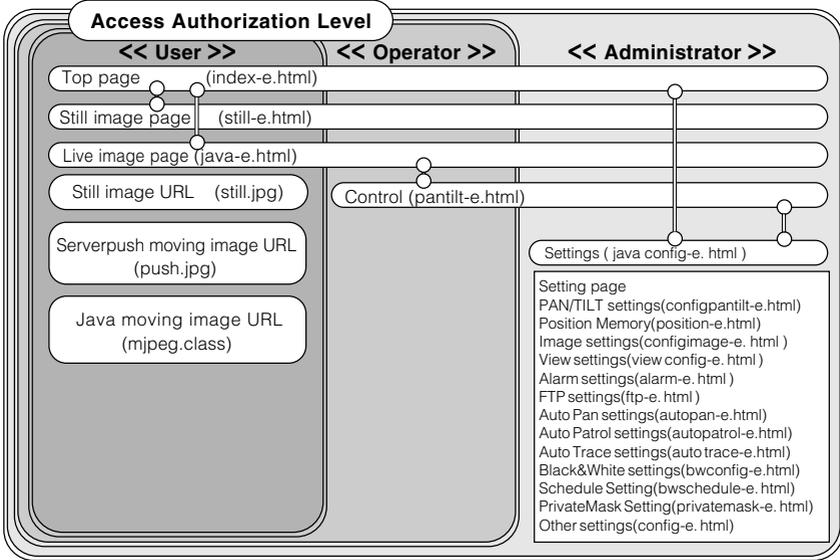> Description in this manual is based on the web page browsing/display screen of Internet Explorer.
>
> **Password**
>
> Upon changing a password, the password confirmation screen may appear, which requires you to enter the new password twice. When this screen appears, enter the same password twice.

5-2 Access Authorization Level

The configuration of URLs (web pages) in VN-C655 is illustrated as follows.

Access Authorization Level

| << User >> | << Operator >> | << Administrator >> |

Top page (index-e.html)
Still image page (still-e.html)
Live image page (java-e.html)
Still image URL (still.jpg)
Serverpush moving image URL (push.jpg)
Java moving image URL (mjpeg.class)
Control (pantilt-e.html)
Settings (java config-e. html)

Setting page
PAN/TILT settings(configpantilt-e.html)
Position Memory(position-e.html)
Image settings(configimage-e. html)
View settings(view config-e. html)
Alarm settings(alarm-e. html)
FTP settings(ftp-e. html)
Auto Pan settings(autopan-e.html)
Auto Patrol settings(autopatrol-e.html)
Auto Trace settings(auto trace-e.html)
Black&White settings(bwconfig-e.html)
Schedule Setting(bwschedule-e. html)
PrivateMask Setting(privatemask-e. html)
Other settings(config-e. html)

Front Page: http://******/index-e.html ("******" represents the URL of VN-C655)
This page provides links to the various web pages of VN-C655.

Authentication of Access Authorization
When there are authenticated passwords, a message requesting entry of user name and password (acess authorization authentication) will appear.

Connect to 192.168.0.2

index-e.html

User name:
Password:
Remember my password
OK   Cancel

① User name is not used.

② Enter a password among the 3 different levels that have been set.

③ Click OK.

Notes

It is recommended that you register a URL (Uniform Resource Locator).

To speed up display of VN-C655 web pages using your web browser, register the URL information during the access test using the set IP addres or DNS host name.

This is represented by [Favorites] in Internet Explorer. To register, use the [Add to Favorites] item in the operation menu of the web browser when a VN-C655 web page is displayed.

5-3 Starting Up the Web Browser

Specify the default web page address of VN-C655 as the page to view using the web browser. (Upon entering the factory setting of the IP address, the web browser will display the front page of VN-C655.)

Note

You may not be able to specify the IP address directly if a proxy server is set for accessing the Internet. In this case, change the proxy settings to enable direct specification.

---

1. Start up the web browser.
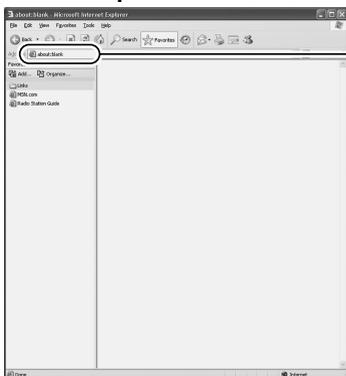
"http://192.168.0.2/index-e.html"

Notes

The terms "Top Page" and "Home Page" are defined as follows in this manual.
Top Page : Refers to /index-e.html
Home Page : • Refers to the specified html page when the default page feature is enabled.
                 • /index-e.html will be used when the default page is disabled.

---

2. The Top page will be displayed.
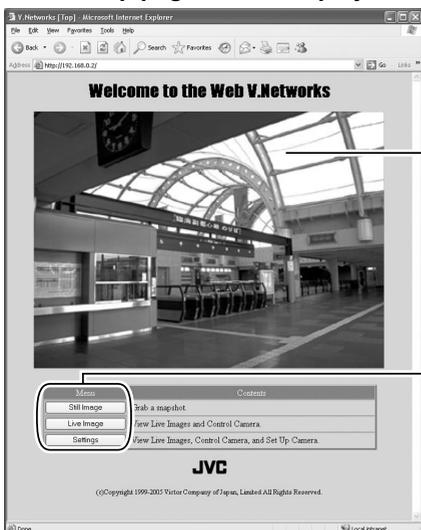
Still Image of VN-C655
Camera image at the point when browsing starts is displayed.

Link buttons to various web pages.
(Click once to jump to these pages.)
• Still Image (☞ Page 109)
• Live Image (☞ Page 110)
• Settings (☞ Page 88)

5-4 Setting Using the Web Browser

Web browsers can be used to set the IP address, image quality or FTP.

1. **Display the Top page.**

Still Image of VN-C655
Camera image at the point when browsing starts is displayed.

Click [Settings].
(Click once to jump to these pages.)

Top Page

2. The [Settings] page will be displayed.

- Control (☞ Page 93)
- PAN/TILT settings (☞ Page 97)
- Position Memory (☞ Page 98)
- Image setting (☞ Page 94)
- View settings (☞ Page 99)
- Alarm settings (☞ Page 100)
- FTP settings (☞ Page 102)
- Auto Pan settings (☞ Page 104)
- Auto Patrol settings (☞ Page 105)
- Auto Trace settings (☞ Page 106)
- Black & White setting (☞ Page 107)
- Schedule setting (☞ Page 107)
- Private Mask setting (☞ Page 108)
- Other settings (☞ Page 90)

Hyperlink to Home Page

Note

Web browsers do not support the function to invert images.

5-4 Setting Using the Web Browser (1. Other Settings)

Other settings:

http://******/config-e.html ("******" represents the URL of VN-C655)

Setup can be performed by specifying details for items in [Other Settings].
(This is also possible using the "VN-C655U Setup Tool" supplied.)

Click Save to update settings.

Description of Items in [Other Settings]

Item	Meaning
❶ DHCP	Select [Available] when DHCP is used.
❷ IP Address	Change the IP address to the one assigned or approved by the network administrator. (*This can only be altered when DHCP is not used.)
❸ Subnet Mask	As with IP address, set subnet mask to a value as instructed or approved by the network administrator. (*This can only be altered when DHCP is not used.)
❹ Default Gateway	Specify the IP address for the default gateway. Specify as 0.0.0.0 if this is not used. (*This can only be altered when DHCP is not used.)
❺ Host Name	Specify up to 8 single-byte alphanumeric characters. Specify when access linking is performed using a host name in an environment that enables use of a DNS (Domain Name System). This is also displayed in the title bar of each subwindow. Do not enter if this is not used or unknown.
❻ MAC Address	This is a physical address unique to the product. Alteration is not possible.
❼ Program Version	This is the firmware version of the VN-C655 camera. Alteration is not possible.
❽ Password (Within 8 characters)	Enter password for VN-C655 up to 8 single-byte alphanumeric characters.
User Level	Enter the User level password.
Operator Level	Enter the Operator level password.
Administrator Level	Enter the Administrator level password.
❾ Cache Control	There may exist a small number of proxy servers that cache cgi. In this case, check "Disable cache".
❿ FTP Server Function	Specify whether the FTP server function is enabled or disabled. When this function is enabled, uploading of various user html pages or GIF/JPEG images to VN-C655 will be possible using conventional FTP client software. * All uploaded files will be placed under the /user folder. Access from the web browser is possible by entering http://192.168.0.2/user/aaa.html. (When referring to aaa.html that is stored in the FTP. 192.168.0.2 is the IP address of VN-C655.) * The FTP user name is fixed as "Administrator". Use the Administrator Level Password as the FTP password.
⓫ Default Page	Usually, the top page of VN-C655 is specified. When this function is availabled, the specified html file will be used as the default page. * Default page refers to the page that is displayed when only the IP address is specified. **Displaying Still Images that are Uploaded to the /user Folder** Still images in the /user folder can be displayed by creating a web page containing the following: **<IMG SRC ="/user/xxxxx">** **(xxxxx refers to the file name of the still image)** **[Note]** Even when this feature is enabled, an error message indicating "404: Not Found" will be displayed when http://192.168.0.2 is entered if the html file specified here does not exist. Be sure to enter correctly.

5-4 Setting Using the Web Browser (1. Other Settings) (Continued)

Description of Items in [Other Settings]

Item		Meaning
⓫ **Default Page (Continued)**		
	Available/Not Available	Set to "Available" when using the default page function and to "Not Available" when not in use.
	File Name	Enter the html file name that is to be used as the default page.
⓬ **HTTP Port**		To enhance the security level, set the HTTP server port number of VN-C655 to a value other than the default value of 80. (Specify any value within the range of 1 to 65535, except for 21 and 554.) Upon changing the HTTP port number, access the page via the web browser by entering http://192.168.0.2:12345/ or http://192.168.0.2:12345/index.html. (When the port number is changed to 12345.) If you have lost track of the HTTP port number, check using the setup tool supplied.
⓭ **NTP Settings**		This is used to perform setting for the NTP (Network Time Protocol) server.
	Available/Not Available	Set to "Available" when using the NTP function and to "Not Available" when not in use.
	Server IP Address	Enter the IP address of the NTP server.
	Time Zone	The local time will be derived from the Greenwich Time.
	Adjust interval	An accurate time will be acquired from the NTP server according to the specified interval to adjust the time to a correct value.

Note

- Password Protection

  VN-C655 is equipped with an access protection feature using a password to restrict browsers (users) that are connected. The access protection function is divided into 3 levels according to the authorization levels. Pages that can be accessed (browsed) for each authorization level are as follows. (Refer to Page 86 for the configuration of web pages in VN-C655.)

Authorization Level	Allowed Access
User Level	Still or motion image pages only
Operator Level	Web pages except the Settings page
Administrator Level	All web pages

Cautions

- Unless a correct Administrator level password is entered, password settings cannot be undone or changed. Please make sure that you do not forget the password.
- If passwords are only set for the User and Operator levels and not for the Administrator level, password entry will not be requested.

  When the IP address, subnet mask, host name or HTTP port settings are changed, a confirmation screen indicating "Are you sure to reset to enable the changes?" will appear. Upon clicking [OK] on this confirmation screen, VN-C655 will be reset internally and settings such as the IP address will be changed. The IP address before change (factory setting) will be disabled and connection to VN-C655 will be cut off upon the reset operation.

  When the web browser is left unoperated for some time, a message will appear indicating that connection cannot be established. This is due to the change in the IP address. (The same message will also appear when the port number is changed.)

5-4 Setting Using the Web Browser (2. Control)

Control window:

http://*****/pantilt-e.html ("*****" represents the URL of VN-C655)
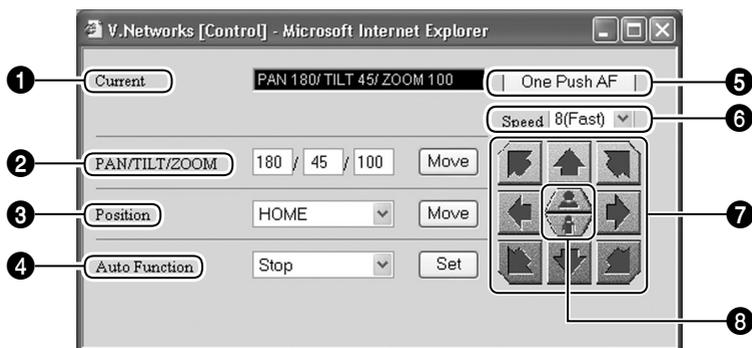
❶ **Current Position**
Displays the current Pan/Tilt and Zoom positions.

❷ **PAN/TILT/ZOOM**
For moving the camera to the specified position upon pressing the [Move] button.

❸ **Position**
For moving the camera to the selected position upon selecting a position number from the pull-down menu and pressing the [Move] button.

❹ **Auto Function**
For starting the Auto Pan, Auto Patrol and Auto Trace operations.
A mode selection item will appear at the top of the controller only when "Auto Patrol" is selected. (☞ Page 105)

❺ **One Push AF**
Click to adjust focus automatically.

❻ **Speed**
For setting the speed of the Pan/Tilt operation.
Set value : 1 (Low), 2, 3, 4, 5, 6, 7, 8 (Fast)

❼ **Pan/Tilt Buttons**
For manual Pan/Tilt operation. Manual operation is possible only when you are clicking one of these buttons.

❽ **Zoom Buttons**
For adjusting the Zoom position. Zoom is possible only when you are clicking these buttons.

5-4 Setting Using the Web Browser (3.Image Setting)

Image Setting window:

http://***/configimage-e.html ("*****" represents the URL of VN-C655)**

Click Default to reset all values to their factory settings (default values).

Click Save to apply settings and to save the set values.

Click Apply to apply settings without saving the set values. These settings will be cleared upon turning off the power of VN-C655, and the previous settings will be restored.

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❶ Zoom
This function sets maximum zoom ratio of the electronic zooming.
(Set value: x1, x2, x4, x6, x8, x10)

❷ Focus
For selecting the mode of focus.
Easy Auto Focus : Focus will be adjusted automatically upon performing Pan/Tilt or Zoom operations on the camera.
Manual : Adjust focus manually.

❸ Color Level
Adjusts the color level of video signals.
(Set value: -5 to 5)

❹ Enhance Level
Sets the contour enhancement which controls the sharpness on the monitor screen. (Set value: -5 to 5)

❺ V. sharpness
This function sets sharpness in the vertical direction of the image.
(Set value: Normal, High)

❻ Pedestal Level
Sets the pedestal level (black level) of video signals.
(Set value: -5 to 5)

❼ Auto Black Control
Use this function when darker parts of a picture are unclear even after the gain has been increased using the AGC (Auto Gain Control).
(Set value: ON, OFF)

❽ AGC:
Sets the maximum gain of the AGC (Auto Gain Control), which electronically increases the gain when the object is under low light conditions.
(Set value: OFF, 10 dB, 20 dB)

❾ Sense Up
This function is used to increase the sensitivity by extending the exposure time. Increasing this value slows the shutter speed and motion may appear unnatural.
(Set value: OFF, x2, x4, x8, x16, x24, x32)

❿ ALC Priority
When an object is dark, this function sets whether priority during monitoring is placed on maintaining the motion of the camera or on picture quality.
(Set value: Motion, Picture)

⓫ Shutter
Sets the speed of the shutter.
(Set value : 1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000)

⓬ Manual Focus Level
For adjusting focus when [Focus] in ❶ is set to "Manual". Focus will be set on a nearer object when the value decreases, and on a distant object when the value increases.
(Set Value: 0 to 100)
Click the [One-push AF] button to enable automatic focus.

⓭ Iris Mode
For performing setting related to lens iris adjustment.
Auto : Adjusts iris automatically to the default state.
Manual : Adjust iris manually.
Auto+ : Adjusts iris automatically to a level brighter than the default state.
Auto- : Adjusts iris automatically to a level darker than the default state.

⓮ White Balance
For setting the white balance, which provides a color standard.
ATW : Adjusts the white balance automatically according to the color temperature of the lighting.
AWC : Adjusts the white balance automatically.
R-B : Adjusts the phases of R (Red) and B (Blue) under AWC mode.
Mg-G : Adjusts the phases of M (Magenta) and G (Green) under AWC mode.

⓯ Average:Peak
Sets the method of exposure detection according to ratio between the average and peak values.
(Set value: 10:0, 9:1, 8:2, 7:3, 6:4, 5:5)

5-4 Setting Using the Web Browser (3.Image Setting) (Continued)

⑯ ExDR Mode

The ExDR function synthesizes pictures captured at a shutter speed of 1/100 and those captured at higher shutter speeds to help monitor objects having large differences in brightness levels.
(Set value: ON, OFF)

⑰ ExDR Level

This function sets which section of the object is to be displayed in the easiest-to-view brighness level in the ExDR mode.
(Set value: -5 to 5)

⑱ BLC

Sets the backlight compensation function. Use this setting when an object appears dark using the Auto Iris function due to the presence of a bright light source behind the object. This function makes it possible to place an unnecessary light source outside the photometry area.
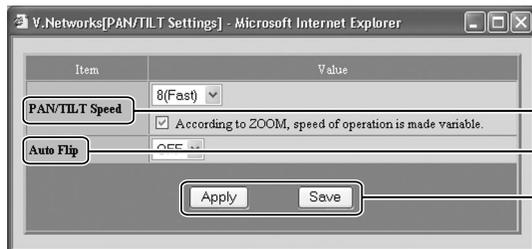(Set value: OFF, Area 1 to Area 4)

Note

For details on settings and set values, refer to "Image Quality Setting" (☞ Page 60 to 64).

5-4 Setting Using the Web Browser (4. PAN/TILT Setting)

PAN/TILT Setting window:

http://***/configpantilt-e.html ("*****" represents the URL of VN-C655)**

This section describes procedures to perform various PAN/TILT settings.

❶

❷

Click Save to apply settings and to save the set values.

Click Apply to apply settings without saving the set values. These settings will be cleared upon turning off the power of VN-C655, and the previous settings will be restored.

❶ **PAN/TILT Speed**

For performing settings related to the speed of Pan/Tilt operation.

1(Low), 2 to 7, 8(Fast):

For selecting the speed of Pan/Tilt operation. The larger the value, the higher will be the Pan/Tilt speed.

According to ZOOM, speed of operation is made variable.:

Alters the pan/tilt speed automatically according to the zoom of the lens.

The speed lowers when the zoom position is set to the Tele-end, and increases when set to the Wide-end.

❷ **Auto Flip**

Inverts images on the screen according to the camera angle. Set this function when shooting an object that passes beneath the camera.

OFF : Auto Flip is disabled.

ON : The image rotates 180˚ horizontally and stops when the object comes directly beneath the camera.

5-4 Setting Using the Web Browser (5. Position Memory Setting)

Position Memory Setting window:

http://***/position-e.html ("*****" represents the URL of VN-C655)**

This section describes procedures for setting preset positions of the connected camera.

Select a position.

Enter a position title.
(Up to 32 single-byte characters (32 bytes))

Position of the current angle of view will be displayed.

Adjust the angle of view and zoom.

Adjust the image quality.
Click [Adjust] to display the [Image Settings] screen.

When setting is complete, click [Register]. The position will be registered.

<Image Settings Screen>

5-4 Setting Using the Web Browser (6. View Setting)

View Setting window:

http://******/viewconfig-e.html ("******" represents the URL of VN-C655)

Click Save to apply settings and to save the set values.

Click Apply to apply settings without saving the set values. These settings will be cleared upon turning off the power of VN-C655, and the previous settings will be restored.

Item	Meaning	Initial Value

Resolution	Select either 640 x 480 or 320 x 240 for the image size.
	*Setting to the Fine mode enables display of image details.
	  Images of moving objects captured in this mode may be blurred,
	  but this is not a malfunction.
		640 x 480

Frame Rate	For setting the maximum number of frames per second when sending out images from VN-C655. Set value : 30, 15, 10, 8, 6, 5, 4, 3, 2, 1, 1/2, 1/3, 1/5, 1/10, 1/15, 1/20, 1/30	15
Distribution Control	For performing settings related to distribution of images.	OFF
OFF	Distributes an image at a fixed compression level. (Set value: 1 to 7) The smaller the value, the higher will be the image quality.	2
ON	Adjusts the compression level automatically to enable distribution of images at the specified bit rate. (Set value: 32 kbps to 8 Mbps)	—

Cautions

- The actual number of frames transmitted and displayed per second are affected by the PC performance, web browser type as well as the LAN environment. When there is a possibility of communication failure with other user operations (particularly in an environment where network traffic is relatively heavy), set [Frame Rate] to a small value.
- Ensure to set [Frame Rate] according to the number of simultaneous access to VN-C655. Display of web pages and move/button operations may not function properly if the processing capacity of the camera is exceeded.
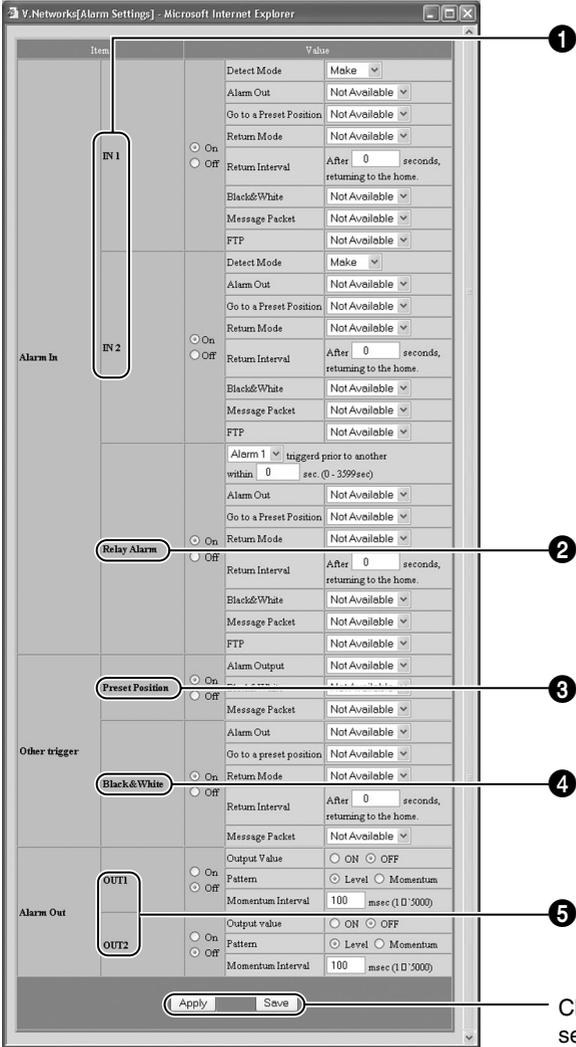
5-4 Setting Using the Web Browser (7. Alarm Setting)

Alarm Setting window:

http://****/alarm-e.html ("******" represents the URL of VN-C655)**

This page describes procedures for setting VN-C655 operation upon input of alarm signals.

Click ⌈ Save ⌉ to apply settings and to save the set values.

Click ⌈ Apply ⌉ to apply settings without saving the set values. These settings will be cleared upon turning off the power of VN-C655, and the previous settings will be restored.

■ Alarm In

For specifying the camera operation upon input of alarm signals.

❶ IN1/IN2

On : Detect Mode
(Set value: Make, Break, Toggle)
: Alarm Out
(Set value: Not Available, OUT1, OUT2)
: Go to a Preset Position
(Set value: Not Available, Home, Position 1 to Position 99)
: Return Mode
(Set value: Not Available, Return, Event)
: Return Interval
(Set value: 1 to 65535 seconds)
: Black & White
(Set value: Not Available, Color, Black & White, Auto)
: Message Packet
(Set value: Available, Not Available)
: FTP
(Set value: Available, Not Available)

Off : Do not use Alarm 1 and Alarm 2.

❷ Relay Alarm

On : Alarm Out
(Set value: Not Available, OUT1, OUT2)
: Go to a Preset Position
(Set value: Not Available, Home, Position 1 to Position 99)
: Return Mode
(Set value: Not Available, Return, Event)
: Return Interval
(Set value: 1 to 65535 seconds)
: Black & White
(Set value: Not Available, Color, Black & White, Auto)
: Message Packet
(Set value: Available, Not Available)
: FTP
(Set value: Available, Not Available)

Off : Do not use Relay Alarm.

■ Other Triggers

For setting alarm activation via methods other than alarm input.

❸ Preset Position

On : Alarm Output
(Set value: Not Available, OUT1, OUT2)
: Black & White
(Set value: Not Available, Color, Black & White, Auto)
: Massage Packet
(Set value: Available, Not Available)

Off : Do not use "Preset Position" Alarm.

❹ Black & White

On : Alarm Out
(Set value: Not Available, OUT1, OUT2)
: Go to a Preset Position
(Set value: Not Available, Home, Position 1 to Position 99)
: Return Mode
(Set value: Not Available, Return, Event)
: Return Interval
(Set value: 1 to 65535 seconds)
: Massage Packet
(Set value: Available, Not Available)

Off : Do not use Black & White Alarm.

■ Alarm Out

For performing setting related to output during an alarm activation.

❺ OUT1/OUT2

On : Output Value
(Set value: ON, OFF)
: Pattern
(Set value: Level, Momentum)
: Momentum Interval
(Set value: 1 to 5000 milliseconds)

Off : Do not output alarm.

Notes

● Set output settings according to settings of the device for which alarm output is sent to.
● When alarm setting is complete, always check to ensure that the alarm is functioning correctly.

5-4 Setting Using the Web Browser (8. FTP Setting)
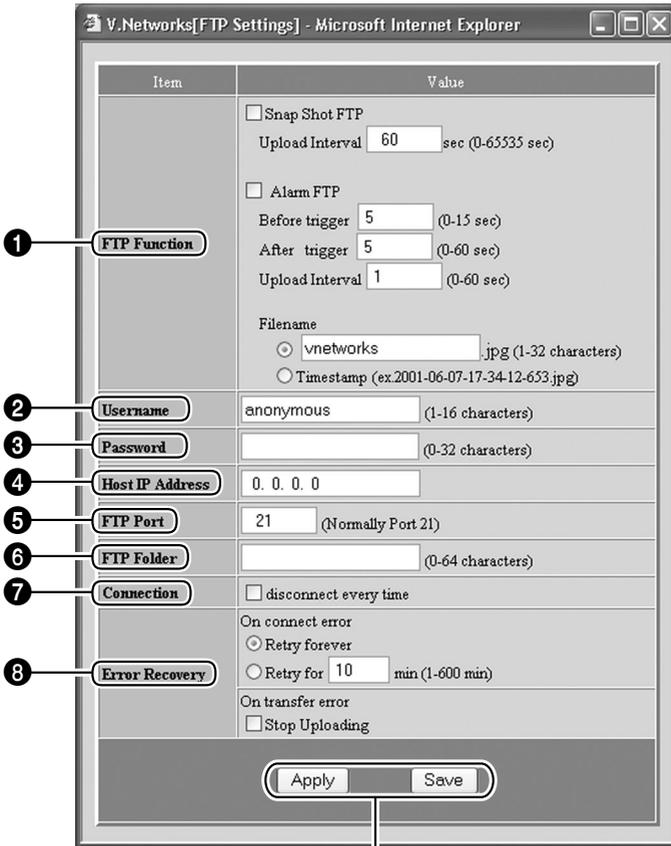
FTP Client Setting window:

http://****/ftp-e.html ("******" represents the URL of VN-C655)**

Notes

● What is an FTP Client?

It is a feature that uploads VN-C655 images (still images) to the existing FTP server at a regular interval.

By doing so, it is possible to make use of the server's image distribution services, thereby enabling distribution of images to a considerably larger number of clients.

Click `Save` to apply settings and to save the set values.

Click `Apply` to apply settings without saving the set values.
These settings will be cleared upon turning off the power of VN-C655, and the previous settings will be restored.

Item				Meaning
❶ FTP Function				For setting whether to use the FTP function.
	Snap Shot FTP			Check this box when the function for uploading JPEG images to the FTP server is to be used regularly.
		Upload Interval		Specify the time interval at which images are uploaded to the FTP server. (Set value: 0 to 65535 seconds)
	Alarm FTP			Check this box to upload JPEG images to the FTP server when there is an alarm input.
		Before trigger		Set the time interval for uploading images before an alarm input. (0 to 15 seconds before trigger)
		After trigger		Set the time interval for uploading images after an alarm input. (0 to 60 seconds after trigger)
		Upload Interval		Specify the time interval for uploading images to the FTP server when in the Alarm FTP mode. (0 to 60 seconds)
		Filename (Still image FTP, Same as Alarm FTP)		Specify the name of the image file to upload.
			*.jpg	File will be uploaded using the file name specified here. ***Only 1 image file remains in the FTP server as images are uploaded as the same file name. (The old image will be overwritten by the latest image.)**
			Time stamp	Images are uploaded using a file name that indicates the current time of the internal clock in VN-C655 in the (YYYY-MM-DD-HH-MM-SS-mmm) format. ***Images are always uploaded with a different file name and therefore all uploaded image files will remain in the FTP server.**
❷ User name				Enter the user name to use for verification with the FTP server. (1 to 16 characters)
❸ Password				Enter the password to use for verification with the FTP server. (0 to 32 single-byte characters) (Displayed as "****")
❹ Host IP Address				Enter the IP address of the FTP server at the upload destination.
❺ FTP Port				Enter the FTP port number at the upload destination.
❻ FTP Folder				Enter the folder name on the FTP server at the upload destination.
❼ Connection				Set whether to disconnect everytime upon uploading.
	Disconnect everytime			Disconnect upon uploading each image. **Connection will have to be re-established when uploading the next image. Specify a recovery action when errors related to FTP occur.**
❽ Error Recovery				Specify a recovery action when errors related to TCP connection or FTP verification occur.
	On connect error			
		Retry forever		Recovery attempt is repeated until the power for VN-C655 is turned off.
		Retry Interval		Repeats recovery attempt within the specified time interval. (Set value: 1 to 600 mins)
	On transfer error			Specify a recovery action upon occurrence of a file transfer error while uploading the images.
		Stop Uploading		Disable the FTP function of VN-C655 automatically upon occurrence of a transfer error. To resume, enable the FTP function.

5-4 Setting Using the Web Browser (9. Auto Pan Setting)

Auto Pan Setting window:

http://******/autopan-e.html ("******" represents the URL of VN-C655)
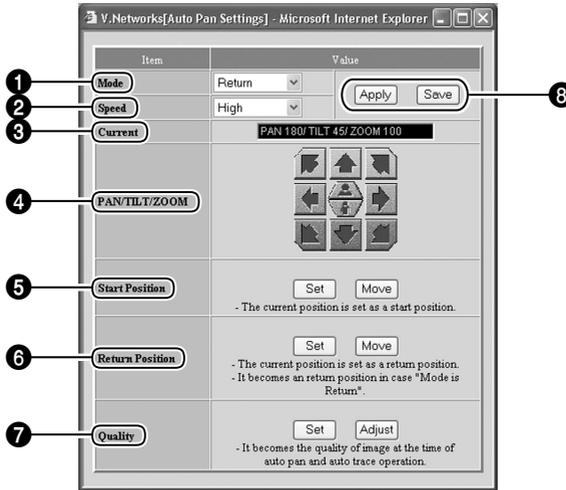
❶ Mode

For setting the mode of Auto Pan operation. (Set value: Right, Left, Return)

❷ Speed

For setting the speed of Auto Pan operation. (Set value: Normal, High, Low)

❸ Current

Displays the current Pan/Tilt/Zoom positions.

❹ PAN/TILT/ZOOM

For manual Pan/Tilt/Zoom operation. Manual operation is possible only when you are clicking one of these buttons.

❺ Start Position

For setting the start position of Auto Pan operation. Specify the angle of view and zoom position for the start position using Pan/Tilt/Zoom ❹, followed by clicking [Set].

To check the Auto Pan start position that has been set, click [Move].

❻ Return Position

For setting the return position of Auto Pan operation. Specify the angle of view and zoom position for the return position using Pan/Tilt/Zoom ❹, followed by clicking [Set]. To check the Auto Pan return position that has been set, click [Move].

❼ Quality

Upon clicking ⌐Set⌐, the current image will switch to the image quality setting during Auto Pan operation.

The same settings will also be applied during Auto Trace operation. To adjust the image quality, do so using the [Image Quality Adjustment] screen by clicking ⌐Adjust⌐.
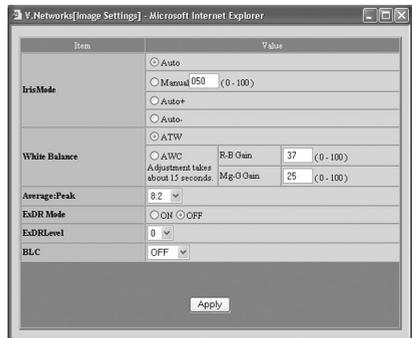
[Image Quality Adjustment] Screen

❽ [Apply] and [Save] Buttons

Click ⌐Save⌐ to apply settings and to save the set values.

Click ⌐Apply⌐ to apply settings without saving the set values. These settings will be cleared upon turning off the power of VN-C655, and the previous settings will be restored.

5-4 Setting Using the Web Browser (10. Auto Patrol Setting)

Auto Patrol Setting window:

http://****/autopatrol-e.html ("******" represents the URL of VN-C655)**

For setting the Auto Patrol operation.

Mode
Select the mode for which settings are to be changed.
(Set value: Mode 1, Mode 2, Mode 3)

Position Number
For each Patrol Number, set a Position Number to move to in sequence.
(Set value: 0 (HOME), 1 to 99)

Duration
For setting the duration for displaying each position.
(Set value: Skip, 10 s, 20, s, 30 s, 45 s, 60 s, 120 s)

Click View to display the current settings for the selected mode.

Click Register to enable the settings.

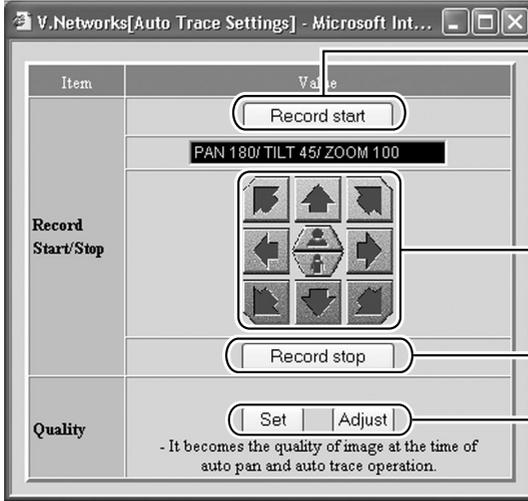## 5-4 Setting Using the Web Browser (11. Auto Trace Setting)

Auto Trace Setting window:

http://******/autotrace-e.html ("******" represents the URL of VN-C655)
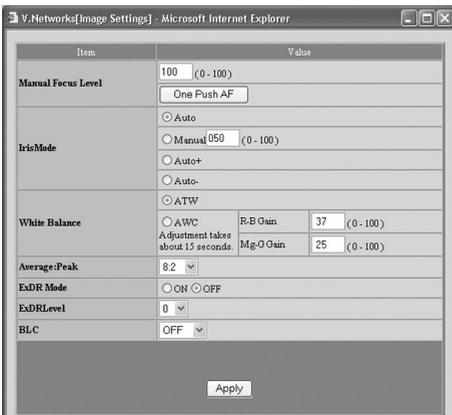
For setting the Auto Trace operation.

① Press [Record start] to display the [Record Start Confirmation Screen]. Memorization of Auto Trace will start upon clicking [OK] and subsequent Pan/Tilt as well as Zoom operations will be stored. (Approximately 30 seconds)

② For manual Pan/Tilt and Zoom operation.

③ To end a recording operation, click [Record stop].
The following warning message will be displayed upon clicking the [Record stop] button if recording has not started.

Record of auto trace is not started.

OK

<Record Start Confirmation Screen>

Are you sure that the operation and setting to a camera is recorded(30sec)?

OK   Cancel

[Image Setting] Screen

Notes

Auto Trace will not be memorized in the following cases. A warning message will appear.
• During Auto Pan operation
• During Auto Patrol operation
• During Auto Trace operation

④ **For setting image quality.**
Upon clicking [Set], the current image will switch to the image quality setting during Auto Trace operation.
The same settings will also be applied during the Auto Pan operation. Use the [Image Setting] screen to adjust image quality.
Click [Adjust] to display the [Image Setting] screen.

5-4 Setting Using the Web Browser (12. Black & White Setting)

B & W Setting window:

http://****/bwcongig-e.html ("******" represents the URL of VN-C655)**

For performing setting related to switching between the Color and Black & White modes.

① **Mode**

Color : Color mode at all times.

Black & White

: Black & White mode at all times.

Auto : For switching automatically between the Black & White and Color modes according to the brightness of the object.

② **Auto Level**

For setting the sensitivity of switching when in the [Auto] mode.

(Set value: Low, Normal, High)

③ **One Push AF**

Adjusts focus automatically upon switching between the Color and Black & White modes when in the [Auto] mode.

④ **Light**

For selecting the type of lighting.

(Set value: Normal, IR)

Click $\boxed{\text{Save}}$ to apply settings and to save the set values. Click $\boxed{\text{Apply}}$ to apply settings without saving the set values. These settings will be cleared upon turning off the power of VN-C655, and the previous settings will be restored.

5-4 Setting Using the Web Browser (13. Schedule Setting)

Schedule Setting window:

http://****/bwsuchedule-e.html ("******" represents the URL of VN-C655)**

This can be used to specify switch between the Black & White/Color modes based on a timer.

Time1/Time2

For setting the time interval for switching to the Color/Black & White/Auto modes.

ON : Switches to the selected mode at the preset time.

(Set value: Color, Black & White, Auto)

OFF : Do not switch using Timer.

Click $\boxed{\text{Save}}$ to apply settings and to save the set values.

Click $\boxed{\text{Apply}}$ to apply settings without saving the set values. These settings will be cleared upon turning off the power of VN-C655, and the previous settings will be restored.
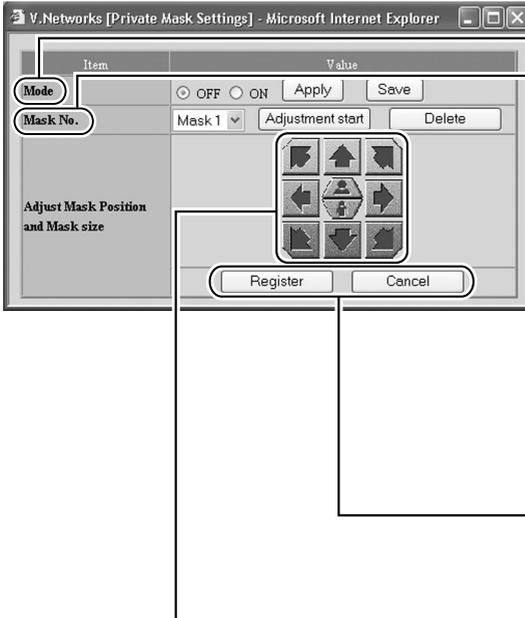
5-4 Setting Using the Web Browser (14. Private Mask Setting)

Private Mask Setting window:

http://******/privatemask-e.html ("******" represents the URL of VN-C655)

For setting the Private Mask function.

① A mask will appear on the screen when "ON" is selected. Even when mask settings are performed, a mask will not appear if this is set to "OFF". Click Apply to view the mask that is currently set.

② Select the mask number for which settings are to be changed. (Set value: Mask 1 to Mask 8) Click Adjustment start to alter the position and size of a mask. Make use of the controller to alter its position and size. Click Delete to delete a selected mask.

③ Click Register to save the settings. Click Cancel to exit without saving the settings.

Mask Position and Size Controller

5-5 Viewing Still Images

Still Image Page:

http://******/still-e.html ("******" represents the URL of VN-C655)

This page can only be used to view still images. Camera image at the point when browsing starts is displayed. To update the image, use [Refresh] or [Reload] on the web browser. To save the displayed image, use [Save As] on the web browser.

Hyperlink to Home Page

5-6 Viewing Live Images

Live Image Page:

http://******/java-e.html ("******" represents the URL of VN-C655)

This page can only be used to view motion images. Camera images are automatically updated and displayed as a motion image.

Notes

Do not use the [Save As] function as this page is not created to support the [Save As] function on the web browser. Similarly, do not use the [Save As] function for web pages as they also do not support this function.
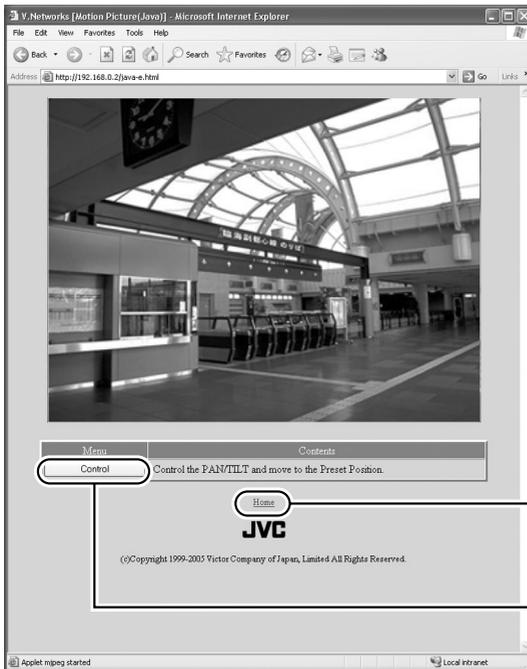
Hyperlink to Home Page

Click here to perform Pan/Tilt operation or move to another position. (☞ Page 93)

5-7 Image Link

Output images of VN-C655 can be pasted onto a separately created web page.
Images (still and motion) captured using VN-C655 can also be incorporated and displayed on a user-created web page.

Displaying a still image:
Still images can be displayed by creating a web page containing the following:

<IMG SRC="http://∗∗∗∗∗∗/still.jpg">
(Enter URL of VN-C655 in "∗∗∗∗∗∗")

Displaying a motion image:
Motion images can be displayed by creating a web page containing the following:

<APPLET CODE="mjpeg.class" WIDTH=640 HEIGHT=480 CodeBase="http://∗∗∗∗∗∗/"></APPLET>
(Enter URL of VN-C655 in "∗∗∗∗∗∗")

Displaying still images uploaded to the /user folder:
Still images in the /user folder can be displayed by creating a web page containing the following:

<IMG SRC ="/user/xxxxx">
(xxxxx refers to the file name of the still image)

Notes

- Both still and motion images are displayed according to the preset image size and compression level values.
  If Java is disabled in the web browser, images may not be displayed properly.
- If a password has been set, password authentication will be necessary before display of motion images using Java is made possible. (This is an Internet Explorer restriction.)
- Ensure that the "WIDTH" and "HEIGHT" values are identical to the image size set in VN-C655.

Others

Troubleshooting

Symptom	Causes/Remedial Actions
Forgotten the VN-C655 IP address that was changed using the "VN-C655U Setup Tool".	• Use the "Search" function in the "VN-C655U Setup Tool" to view the list of IP addresses for cameras connected to the network. (☞ Page 28)
Unable to record.	• Has the folder for saving images been deleted? Check to ensure that the folder exists. (☞ Page 77) • Is the hard disk of your PC full? Check the available hard disk space on your PC and delete unwanted files.
A long time is required to cancel an action when the "Connecting ..." message is displayed.	• Once the connection is activated, it cannot be canceled within a few seconds.
Color is unsatisfactory.	• Check the color adjustments of the monitor and video card. • Is the color setting of your PC screen set to High Color (16 bits) or lower? If this is so, change it to True Color (24 bits) or higher. It will be difficult to achieve display of natural color tones using a setting that is lower than this. • Adjust the White Balance. Adjust White Balance manually on the [Image Quality Setting] screen. (☞ Pages 59, 94) • When shooting scenes with different light sources (e.g. when alternately shooting outdoor scenes under the sunlight and indoor scenes under a fluorescent light), Auto White Balance may take some time to function. Hue may differ slightly according to different objects, but this is not a malfunction.
Operation fails upon changing White Balance to the AWC mode.	• White Balance is automatically adjusted when it is set to AWC. Adjustment will take about 15 seconds, during which setting of image quality is not possible.
Image size and quality changes automatically.	• When a VN-C655 is connected to multiple PCs, priority will be given to the PC for which VN-C655 operation /setting is last performed.
Connection to VN-C655 cannot be established or gets cut off.	• When the network is loaded with frequent broadcasting or collisions, connection may not be established or may be cut off when errors occur with the network. Check the network status.

Symptom	Causes/Remedial Actions
Unable to perform camera control or settings acquired are incorrect for a span of about 60 seconds after turning on the power.	● About 60 seconds are required for initialization of the camera to complete upon turning on the power. To perform camera control or acquire settings, do so by allowing an interval of at least 60 seconds after turning on the power.
Video images cannot be displayed smoothly.	● Live images may appear in slow motion or loss of frames may occur when the PC specifications or network bandwidth is inadequate.
Forgotten the password upon enabling the password protection feature.	● Repair services will be required to undo the password protection feature. Please consult your dealer for details. Please also note that you may be asked to produce identification cards for security reasons.
Camera turns to another direction upon initializing.	● Has the Home position been registered? Register accordingly if this has not been done. (☞ Pages 66, 98)
Unable to select position.	● Are the positions registered? Register positions accordingly if this has not been done. (☞ Pages 66, 98)
Video images are not displayed.	● Is the camera connected to a DC 18 V power supply? Check connection of the Converter Unit. (☞ Page 18) ● Is the LAN cable connected? Check connection of the LAN cable. (☞ Page 16)
Delay in the camera's Pan/Tilt actions.	● Is the Pan/Tilt speed set to a small value? Set this to a larger value. (☞ Pages 69, 97)
Zoom does not move to "0"	● Is the maximum Digital Zoom value set to a value other than x10? Zoom to "0" is possible when this is set to x10.

Specifications

■ Camera

Image pickup device	: 1/4 inch type, interline transfer CCD, 768(H) x 494(V) pixels.
Sync system	: Internal
Scanning frequencies	: Horizontal 15.734 kHz, Vertical 59.94 Hz
White balance	: TTL auto tracking/ Manual
Electronic shutter	: 1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.
Back light compensation	: Possible by selecting 4 photometry areas
Colour level adjustment	: Possible
Contour correction (ENHANCE)	: Both Horizontal and Vertical (level adjustable)

< Monitor Output >

S/N	: 50 dB (typical), (AGC OFF, ENHANCE –5)
Minimum object illumination	: Color mode : 2.0 lx (50 % output, AGC 20 dB, WIDE end) 0.6 lx (25 % output, AGC 20 dB, WIDE end) 0.07 lx (50 % output, AGC 20 dB, WIDE end, 32x slow shutter) B & W mode : 0.06 lx (50 % output, AGC 20 dB, WIDE end)
Dynamic range	: 50 dB (ExDR mode)

■ Lens

Zoom ratio	: Approx. x25, 10x electronic
Focal distance	: 3.8 mm to 95 mm
Maximum aperture	: F1.6 (WIDE) to F3.7 (Telephoto)

■ Pan/Tilt Mechanism

|	
Panning range	: 360° endless revolution
Panning speed	: 1°/s to 300°/s
Tilting range	: 0° to 90° (Horizontal – Straight downwards)
Tilting speed	: 1°/s to 180°/s

■ LAN standard

Communication protocol	: TCP, UDP, FTP, ICMP, ARP, DHCP, NTP, HTTP

■ General

Power supply	: DC 18 V, 1.4 A
Number of preset positions	: 100
Ambient temperatures	: 0°C to 50°C (32°F to 122°F) (operating), 0°C to 40°C (32°F to 104°F) (recommended)
Ambient humidity	: 20 % to 85 %RH (without condensation)
Mass	: 2.2 kg (4.850 lbs)
Accessories	: Read Me First .... 1 Warranty Card .... 1 Service Information Card .... 1 Ceiling Mount .... 1 Screw (M3 x 12 mm) ... 1 Cable plate .... 1 CD-ROM .... 1 Converter Unit 1

■ **External Dimensions**
  Unit: mm (inches)

87 (3.425)

20 (0.787)

188 (7.402)

190 (7.480)

79 (3.110)

SR70 (2.756)

φ 152 (5.984)
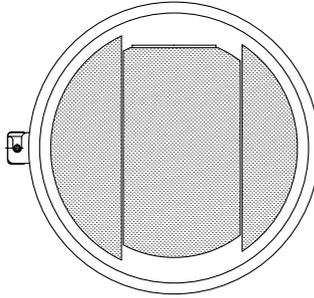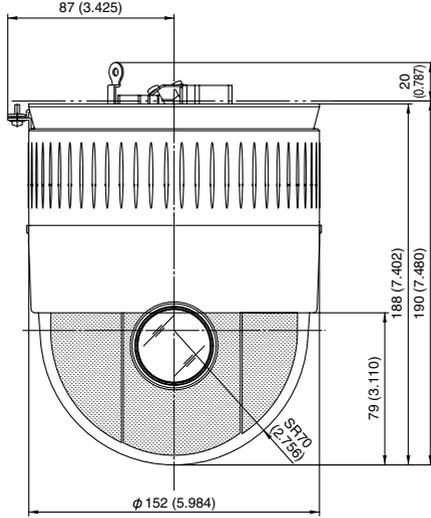
■ **Ceiling Mount Hole**
  Unit: mm (inches)

Screw Positions

Mounting hole
ø90(ø3.543)

113 (4.449)

113 (4.449)

Screw
Positions
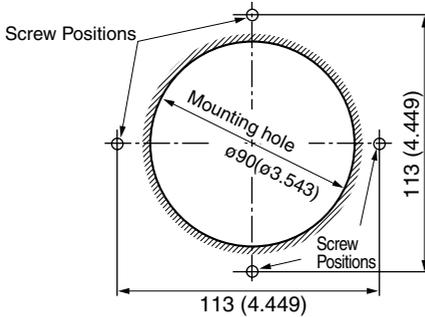
* Design and specifications are subject to change without notice.

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